

AD-A133 324

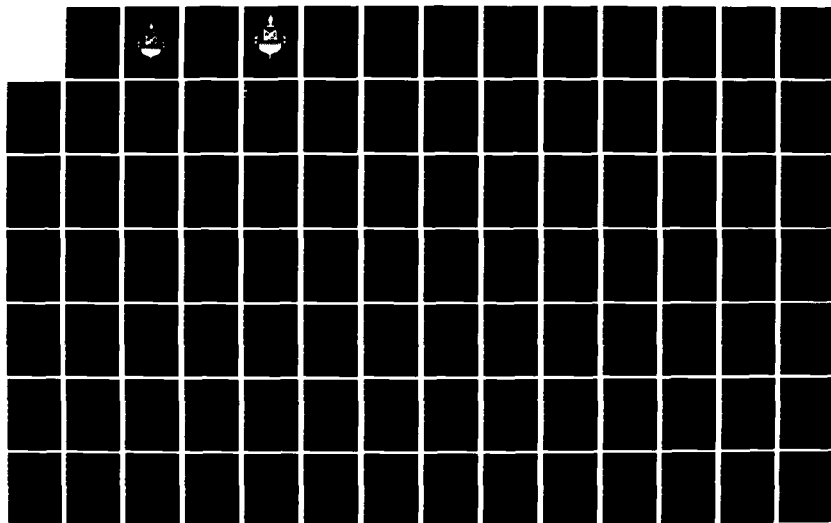
HISTORY OF THE INDUSTRIAL COLLEGE OF THE ARMED FORCES  
(U) INDUSTRIAL COLL OF THE ARMED FORCES WASHINGTON DC  
T W BAUER 1983

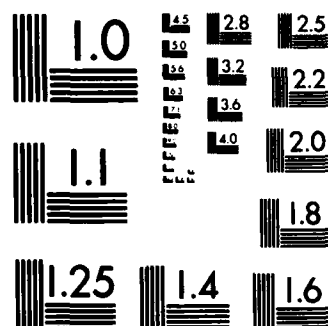
1/2

UNCLASSIFIED

F/G 15/7

NL





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A133324

# The History of the Industrial College of the Armed Forces 1924-1983



DTIC

OCT 7 1983

A

Alumni Association  
of the Industrial College of the  
Armed Forces  
Washington, D.C.

DTIC FILE COPY

83 10 04 207

This document is prepared  
for public release as  
a contribution to the  
history of the Industrial College of the Armed Forces

HISTORY OF THE INDUSTRIAL COLLEGE  
OF THE  
ARMED FORCES

Theodore W. Bauer

with contributions by

Ms. Susan Lemke - Ms. Diane L. Smith -  
Science and Management Resources, Inc.

Alumni Association  
of the Industrial College of the  
Armed Forces

Washington, D.C.

1983



Accession For	
1. (1/1)	<input checked="checked" type="checkbox"/>
2. (1/1)	<input type="checkbox"/>
3. (1/1)	<input type="checkbox"/>
Distribution/	
Availability Notes	
Date/for	
Dist. Special	
A	

This document has been approved  
for public release and sale; its  
distribution is unlimited.





GENERAL ORDERS, }  
No. 7. }

U. S. WAR DEPARTMENT,  
WASHINGTON, *February 25, 1924.*

**Establishment of The Army Industrial College.**—1. A college, to be known as The Army Industrial College, is hereby established for the purpose of training Army officers in the useful knowledge pertaining to the supervision of procurement of all military supplies in time of war and to the assurance of adequate provision for the mobilization of materiel and industrial organization essential to war-time needs.

2. For the present such parts of the Munitions Building, located in Washington, D. C., as may be available and necessary will be assigned to its use.

3. Direct supervision and control of The Army Industrial College are vested in the Assistant Secretary of War.

[A. G. 352 (2-25-24).]

BY ORDER OF THE SECRETARY OF WAR:

J. L. HINES,  
*Major General, Acting Chief of Staff.*

OFFICIAL:

ROBERT C. DAVIS,  
*The Adjutant General.*

88186\*—24

# History of the Industrial College of the Armed Forces

## Table of Contents

	Page
<b>PREFACE</b> .....	i
<b>FOREWORD</b> .....	ii
<b>About the Author</b> .....	iii
<b>I. GENESIS OF THE ARMY INDUSTRIAL COLLEGE</b> .....	I-1
<b>II. BUILDING A FOUNDATION: THE ARMY INDUSTRIAL COLLEGE TO WORLD WAR II</b> .....	II-1
A. The Formative Years .....	II-1
B. Expansion of the Curriculum .....	II-4
C. A Period of Growth .....	II-5
D. Initial Reactions to World War II	
The Short Courses .....	II-6
<b>III. EMERGENCE OF THE INDUSTRIAL COLLEGE OF THE ARMED FORCES</b> .....	III-1
A. Initial Steps .....	III-1
B. The Echols Board .....	III-2
C. The Hancock Board .....	III-6
D. The New Industrial College of the Armed Forces ..	III-12
E. Establishment of the Board of Advisors .....	III-17
<b>IV. THE FORMATIVE PERIOD, 1948-1962</b> .....	IV-1
A. A College at the Highest Educational Level; The Problem of Prestige .....	IV-1
B. Evolution of the ICAF Charter: The "Capstone" Concept .....	IV-3
C. 1962 .....	IV-8
D. The Student Body .....	IV-9
E. Curriculum Development .....	IV-12
1. A Broadening Trend .....	IV-12
2. The Curriculum .....	IV-16
F. The Baxter Board .....	IV-19
G. A New Building for the Industrial College .....	IV-23
H. Extension Programs .....	IV-25
1. The Seminars .....	IV-26
2. Correspondence Studies .....	IV-28
I. The Board of Advisors .....	IV-31
J. The Athletic Program .....	IV-34
<b>V. THE INDUSTRIAL COLLEGE IN TRANSITION, 1962-1967</b> ....	V-1
A. A Change of Direction .....	V-1
B. Reorganization of the College, 1964 .....	V-5
C. Curriculum Review and Revision .....	V-9
1. An In-Depth Curriculum Review .....	V-9
2. Planning the 1965-1966 Curriculum .....	V-11
3. The 1965-1966 Program .....	V-15
4. Planning for the Future .....	V-22
5. The Management Education and Training Study ..	V-24
D. Extension Programs .....	V-25
1. The National Security Seminary Program .....	V-25
2. The Correspondence Course .....	V-26
E. The Board of Advisors .....	V-28

# History of the Industrial College of the Armed Forces

## Table of Contents

	<u>Page</u>
<b>VI. A PERIOD OF EVOLUTIONARY GROWTH, 1967-1975</b> .....	VI-1
A. The "New Industrial College" .....	VI-1
B. Education Levels of Incoming Students .....	VI-3
C. Curriculum Development .....	VI-4
1. The 1967-1968 and 1968-1969 Programs .....	VI-4
2. The ICAF Curriculum, 1970-1974 .....	VI-7
3. A Transitional Year, 1974-1975 .....	VI-10
D. Extension Programs .....	VI-12
1. The National Security Seminars .....	VI-12
2. The Correspondence Study Course .....	VI-13
E. The Board of Advisors .....	VI-16
<b>VII. ICAF AS A COMPONENT OF THE NATIONAL DEFENSE UNIVERSITY</b> .....	VII-1
A. The Consolidation Issue .....	VII-1
B. Relations with the Committee on Excellence in Education .....	VII-4
C. Establishment of the National Defense University .....	VII-7
<b>VIII. THE INDUSTRIAL COLLEGE SINCE 1975</b> .....	VIII-1
A. Accent on Mission, 1975-1976 .....	VIII-1
B. Administration and Organization .....	VIII-3
C. The Student Body .....	VIII-6
D. Curriculum Development .....	VIII-7
E. The Electives and Research Programs .....	VIII-10
F. The Cooperative Degree Program .....	VIII-11
G. The New Board of Visitors .....	VIII-12
H. Final Phase of ICAF'S External Programs .....	VIII-12
<b>APPENDIX A: DIRECTORS AND COMMANDANTS, ARMY INDUSTRIAL COLLEGE AND INDUSTRIAL COLLEGE OF THE ARMED FORCES</b> .....	A-1
<b>APPENDIX B: ORGANIZATION CHARTS</b> .....	B-1
<b>APPENDIX C: PHOTOGRAPHS</b> .....	C-1
<b>SUGGESTIONS FOR FURTHER READING</b>	

# History of the Industrial College of the Armed Forces

## PREFACE

The ancestor of the Industrial College of the Armed Forces - the Army Industrial College - owed its origins to the zeal and dedication of a few visionaries who believed that educating officers in economic mobilization planning was important for national security. Established on 25 February 1924, the small Army Industrial College gradually broadened its curriculum and increased the size of its student body. Before World War II the Army Industrial College, with its emphasis on the economic aspects of national security was a unique military college with no counterpart in other nations. World War II brought new recognition of the important role of the Industrial College. When the College was reconstituted as a joint-service institution after World War II, graduate level instruction was provided in economic mobilization, but emphasis soon shifted to the management of defense resources. The Industrial College of the Armed Forces was designated by its charter as an institution at the highest educational level in the Defense Establishment.

The Alumni Association of the Industrial College of the Armed Forces undertook the preparation of this history to meet a long-recognized need for a comprehensive account of the development of the College. This project is especially timely in view of the 60-year anniversary of the Industrial College on 25 February 1984.

The story of the Industrial College can be told in different ways and from various perspectives. The present study emphasizes changes in mission and the evolution of the instructional program. Extensive use was made of the annual reports submitted by the Commandants of the Industrial College to the Joint Chiefs of Staff. Two informative histories of curriculum changes during the crucial period 1964-1967 prepared by Dr. Stanley L. Falk of the ICAF faculty were of great assistance. Throughout the preparation of this project, Ms. Susan Lemke and Ms. Diane L. Smith of the National Defense University Library staff provided the author with essential research materials. A special thanks for transforming the author's rough draft into a print-ready manuscript should go to the staff members of Science and Management Resources, Inc. whose President, Joseph M. Von Sas, is an alumnus of the Industrial College and a Director of the Alumni Board.

In presenting this initial history of the Industrial College, it is the hope of the Alumni Association that more historical studies will be made in the future of what has become a major educational institution in the Defense Establishment.

*Theodore W. Bauer*

Theodore W. Bauer

# History of the Industrial College of the Armed Forces

## FOREWORD

### FACING THE FUTURE

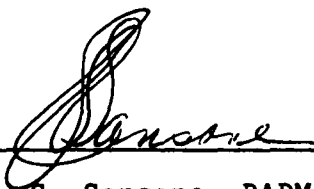
The Industrial College can face the future, confident that it will continue to serve an important role in the Defense educational structure. Equipped with an important mission and building on a firm foundation there is every indication that the College's instructional program will continue to be effective and responsive to Defense educational requirements. This traditional receptiveness to national security issues and problems in the education of selected military officers and civilian executives can be expected to bring to the Industrial College increased recognition and prestige. The Industrial College of the Armed Forces faces a bright future as it celebrates its 60th anniversary on 25 February 1984.

# History of the Industrial College of the Armed Forces

## About the Author

Dr. Theodore Bauer has been associated with the Industrial College of the Armed Forces in a number of capacities since 1965. For ten years, he was a professor of national security affairs, and for seven years, Chief of Textbooks, first for the Industrial College and later for the National Defense University Correspondence programs. For eight years prior to his ICAF association, Dr. Bauer was a historian and analyst for the National Security Agency.

This is the first definitive history of the Industrial College. The school and the ICAF Alumni Association are indebted to Dr. Bauer for his selfless efforts and the long hours, days and months of research necessary to write this history. Indeed, the school, the students, the graduates and the Alumni Association are extremely fortunate in having such a hard working, dedicated and extraordinarily talented historian as Dr. Bauer to write the history of the Industrial College.



---

J. S. Sansone, RADM, SC USN  
President  
ICAF Alumni Association

## History of the Industrial College of the Armed Forces

### Chapter I

#### I. GENESIS OF THE ARMY INDUSTRIAL COLLEGE

The United States entered World War I in a surge of patriotism and took great pride in its contributions to the Allied victory. With demobilization and the transition to peace, the elation brought by victory gave way to assessments of the Nation's war efforts. The United States entered the conflict unprepared for a modern all-out war that required the mobilization of the entire strength of the Nation. This tremendous mobilization effort was carried out without the benefit of experience of how to support an all-out war fought on a global scale. For example, before the United States launched its preparations for World War I the Army had forage as a principal item of supply and spurs and steel wagon tires were regular test and evaluation (T/E) items.

The War Industries Board headed by Bernard M. Baruch directed economic mobilization in World War I. The records of this Board and the studies prepared by the Planning Branch of the Office of the Assistant Secretary of War reveal the problems encountered in the sudden conversion of the Nation to a war footing. They reveal the costly fumblings and waste in the hastily-conceived programs that accompanied economic mobilization.

Soon after the conclusion of World War I some of the officers who had participated in economic mobilization were concerned that the lessons learned from this experience would soon be forgotten. They believed that the fumbling operations of war production programs illustrated the need for better mobilization planning that would include the preparation of officers for such responsibilities.

With the return of peace, appraisals of the U.S.'s war effort found much that had gone wrong. Returning servicemen reported that often many types of essential equipment were not available when needed. When it was available chances were that it was of inferior quality. The nation's press widely criticized what they perceived as bungling and inefficiency in the Service of Supply. The alleged shortcomings in the mobilization of U.S. economic strength in supplying the needs of the Armed Forces came as a shock to a nation that had been assured by wartime propaganda that the industrial and economic supremacy of the United States gave it a world leadership role. Against this background, the Military Services were especially concerned with ways to improve their procurement operations and with avoiding a repetition of such shortcomings in future war emergencies.



## History of the Industrial College of the Armed Forces

### Chapter I

In response to such concerns and criticisms, Congress launched an investigation of the conduct of the war that revealed many supply problems. America's industries did not produce on time badly needed quantities of ordnance, tanks, aircraft and other materials. Civilian experts in economic mobilization such as Bernard M. Baruch and Daniel Willard, urged the prompt establishment of a national defense framework that would reflect full recognition of the importance of economic factors in a major war and would provide machinery for effective advance strategic planning. Their views were a factor<sup>1</sup> in the enactment of the National Defense Act of 1920.

The National Defense Act of 1920 was followed by a series of actions that led to the establishment of the Army Industrial College in 1924. Late in 1920 the Assistant Secretary of War Jonathan M. Wainwright began to implement the planning mission called for by that Act. His ultimate goal was to provide a school for that function - a goal supported by the Secretary of War, Newton D. Baker. As a step in that direction the Assistant Secretary planned to establish in his office an organization for training in the industrial aspects of modern war. But what kind of an organization would best serve that purpose? In his search for answers he consulted prominent civilians, military officer<sup>s</sup>, professional societies and others, for suggestions. Bernard M. Baruch, in particular, was on record as an advocate of such training. He had said "I should like to have a little school or something of the kind. I would make it as live a thing as I could." This statement was long remembered by the Industrial College where Mr. Baruch came to be regarded as a founding father.

The Assistant Secretary was unable to establish the kind of training institution he regarded as necessary due to lack of funds. Instead, in May 1921, he instructed his Executive Officer, Colonel Harley B. Ferguson, C.E., to set up a series of Procurement Planning Sections in the Office of the Assistant Secretary of War. In October of the same year the sections were combined into a Planning Branch of eight officers, each assigned to a major phase of industrial preparedness. Other officers were assigned as assistants to this group for on-the-job training functions. Through this modest beginning, a faculty and school began to take shape in the Office of the Assistant Secretary of Defense. The first subject areas considered included raw materials,

<sup>1</sup> This discussion is largely based on "Historical Background of the Army Industrial College" revised 8 June 1945, and on the Proceedings of a War Department Board (the Echols Board) appointed on 27 November 1943 in connection with the reopening of the Army Industrial College.

## History of the Industrial College of the Armed Forces

### Chapter I

labor, price controls, priorities, conservation, and the procurement of end items. Attention was also given to natural resources, strategic and other important commodities and the stockpiling of materials related to national security. Principal sources for industrial mobilization planning<sup>2</sup> were the World War I records of the War Industries Board.

This first effort consisted largely of the preparation of staff studies and had very few participants. It was a kind of on-the-job training undertaken by officers during whatever time they could spare while performing their regular duties.

Colonel Dwight F. Davis who succeeded Mr. Wainwright as Assistant Secretary of War in March 1923 was not satisfied with the limited scope of the training program. He set for himself a twofold goal: to establish an educational program that would provide the training essential for preparing sound mobilization plans; and would instruct officers in how to conduct Army procurement planning and operations. He emphasized that a substantial number of both regular and reserve officers should receive such instruction.

As a first step, he directed the Planning Branch to prepare an "Orientation Course of Readings" and "Instructions for Reserve Officers". At the same time he directed each Supply Branch to prepare a procurement manual for instructing Reserve Officers. By these actions he hoped to improve the effectiveness of routine procurement operations and to provide the basis for industrial mobilization planning. In addition, he formed a series of military committees on various commodities. Thus an evolutionary process was preparing the way for an educational institution devoted to the organized study of procurement planning and industrial mobilization.

During this same period several officers in the Ordnance Department emphasized the need for training officers in industrial mobilization planning and for participating in the first phase of industrial mobilization. They suggested that the Ordnance Department and the Assistant Secretary of War recommend the establishing of schools for those purposes. The Chief, Ordnance Department, approved a recommendation to that

<sup>2</sup> An informative and comprehensive history of the college is included in The Industrial College of the Armed Forces, 1924-1949 Twenty-Fifth Anniversary; 25 February 1949. This publication also lists the Directors and Commandants, Board of Advisors (in 1949) Staff and Faculty, 1924-1949 and members of the graduating classes from 1924 to 1949.

## History of the Industrial College of the Armed Forces

### Chapter I

effect. Meanwhile, Colonel Ferguson interested the Secretary of War John W. Weeks in the embryonic school in the Office of the Under Secretary of War. Secretary of War Weeks agreed that the existing apprentice-type of instruction was entirely inadequate and approved Colonel Ferguson's recommendations that a school be established for instruction in industrial mobilization and military procurement. This approval by Secretary Weeks led to the founding of the Army Industrial College in February 1924.

Following the action by the Secretary of War, Colonel Ferguson and two colleagues developed a plan for a school devoted to industrial mobilization and military procurement planning. The Secretary of War approved the plan and ordered that it be implemented. Since a functioning school could not be set up overnight, Colonel Ferguson, as an interim measure, established a special course in the Army War College - a course that was continued for several years. He also considered that courses to provide the desired instruction be instituted at such institutions as Harvard University, the University of Chicago and the Babson Institute. As a preparatory step, eight officers from the Army supply branches were sent to the Harvard Graduate School of Business to prepare them for duty as prospective faculty members of the proposed new school. Certainly the actions taken to start this school were not precipitous. Instead it was a deliberate step-by-step process toward a firmly fixed goal.

Finally, on February 21, 1924, the new Army Industrial College opened its first course, thus marking the beginning of the long history of what eventually became the Industrial College of the Armed Forces. The opening of the College was attended by the Secretary of War and the Assistant Secretary of War. Four days later, on 25 February, 1924 the Army Industrial College was formally established by War Department General Orders No. 7 which stated:

Establishment of the Army Industrial College. 1. A college, to be known as The Army Industrial College is hereby established for the purpose of training Army officers in the useful knowledge pertaining to the supervision of procurement of all military supplies in time of war and to the assurance of adequate provision for the mobilization of materiel and industrial organization essential to wartime needs.

Space for the new enterprise was provided in the Munitions Building. The Assistant Secretary of War was assigned direct supervision and control of the College. As expected, Colonel Ferguson became the Director of the College which he had helped to create.

## History of the Industrial College of the Armed Forces

### Chapter I

The founding of this college was a reaction to the widespread criticism of the material-supply side of America's participation in World War I. No doubt the industrial failures in that war were exaggerated by the press but it was all too evident that there had been some real problems. With regard to these difficulties the British wartime leader David Lloyd George, with references to the American war effort, stated that,

"There were no braver or more fearless men in any Army but the organization at home and behind the lines was not worthy of the reputation which American businessmen have deservedly won<sup>3</sup> for smartness, promptitude and efficiency."

Assistant Secretary of War Davis regarded the new college as a most important element in our national defense. He believed that in the future only graduates of the Army War College and the Army Industrial College should be considered for promotion to general officer rank. Later, on looking back on his career, Mr. Davis declared that of all his official acts as Assistant Secretary and Secretary of War none ranked in importance with the establishment of the Industrial College.

The enthusiasm of Mr. Davis and other founders of the Army Industrial College was not shared by the press or the military establishment. The press paid little attention to the opening of the college. Within the Army the event was regarded with misgivings that, at times, bordered on antagonism. It took a year of effort to convince the Army register to list the graduates of the College. This cool reception can be attributed, in part, to a feeling that the Army did not need another new school. More important was the apprehension of many officers that their assignment to the College would entail the loss of chances for command assignments in time of war and the consequent retarding of their opportunities for advancement. They anticipated that Industrial College graduates would most likely draw boring assignments in military procurement or supply. Aside from being unattractive, these areas were regarded as providing few opportunities for rapid advancement. In time, these apprehensions subsided and the Industrial College came to be regarded as performing essential functions. Graduation from the college came to be regarded as professional and career assets. Before that time arrived, however, the new school had to prove itself.

<sup>3</sup> Quoted in The Industrial College of the Armed Forces, 1924-1949, p. 1.

## History of the Industrial College of the Armed Forces Chapter II

### II. BUILDING A FOUNDATION: THE ARMY INDUSTRIAL COLLEGE TO WORLD WAR II

The magnitude of the procurement of military supplies in World War I drew national attention to the management of this function in the War and Navy departments. Timely support of the Armed Forces required efficient management of military procurement and supply management functions - requirements that put a premium on leadership. For military and civilian officials who had participated in the expansion of military procurement in that war and had to cope with its often frustrating problems the lessons of this experience were extremely important. Continuing emphasis had to be given to industrial mobilization planning as a fundamental requirement of national security. These views influenced the framing of the statutory basis for national defense policy for the early post-war period.

Concern for military procurement and industrial mobilization preparedness was reflected in the National Security Act of June 9, 1920. The Act assigned to the Office of the Assistant Secretary of War the dual responsibilities of supervising the procurement of all military supplies for the War Department and for insuring that appropriate measures were taken for industrial mobilization in a national emergency. The Act charged the Assistant Secretary of War with "the assurance of adequate provisions" for industrial mobilization. This could be interpreted to mean that the Assistant Secretary was responsible for the preparation of workable plans for that purpose. Support of such planning became the basic and initial mission of the Army Industrial College following its establishment four years later. This mission soon underwent a broadening process that reflected changing perceptions of national security requirements.

#### A. The Formative Years

The building of the Army Industrial College was a long, evolutionary process that required imagination and persistence. At the time of its establishment no other

<sup>1</sup> Sources for this chapter include: The Industrial College of the Armed Forces, 1924-1949, Twenty-Fifth Anniversary; "Historical Background of the Army Industrial College" revised 8 June 1945 (unpublished paper in NDU Library); Proceedings of a War Department Board (the Echols Board) appointed on 27 November 1943 in connection with planning for the reopening of the Army Industrial College; and Major J.M. Scammeld, CMP, USA, History of Industrial College of the Armed Forces, 1946 unpublished study in the NDU Library.

## History of the Industrial College of the Armed Forces

### Chapter II

nation in the world had such an institution. It was up to the new college to prove its worth - to demonstrate that its mission was important and that it was being implemented in an effective manner. Only by so doing could it hope to attain prestige and a high position in the War Department. The developing of a curriculum was a formidable task that entailed the breaking of new ground. There were no models to follow. Further complicating this task was the meagerness of the initial effort - the limited resources assigned to the new college. In those early years the faculty and student body were small and the short four month courses were largely unstructured.

The first students selected were from the Army Supply Services and they were provided instructions designed to help them in the performance of their regular duties. The College made only slow progress. For years its role in the War Department was quite limited. Until World War II it was never assigned a general officer as Director. Members of the student body ranged from Army Captains and Lieutenant Colonels and Navy officers of comparable rank after the Navy began to participate in the College.

The apparently modest role of the Army Industrial College to World War II can be deceiving. During that period the College developed a solid basis for studying industrial preparedness and economic mobilization. The methodologies that were developed, notably problem solving and the student committees approach were also employed later by the Industrial College of the Armed Forces. Prevailing national attitudes toward war and the Military Establishment help to explain the limited role of the Army War College. Most Americans regarded a future World War as very unlikely. After all, World War I had been so devastating, so costly in human lives, that a repetition was unthinkable. Even in military circles, planning for industrial preparedness and mobilization for a future war emergency was conducted with no sense of urgency. Such complacency was rudely interrupted in the 1930s by the gathering war clouds in Europe and Asia and the consequent outbreak of hostilities. Soon another World War was in progress. In the United States military preparedness assumed a new urgency. As the Nation looked to its mobilization plans - limited as they were - graduates of the Army College were all too few for the urgent tasks facing the Defense Establishment.

The first course of the Army Industrial College opened on 21 February 1924 with nine officers selected from the Army Supply Services but with no predeveloped curriculum. The Director, Colonel Harley B. Ferguson, CE, assisted by the part-time services of four officers, developed a program

## History of the Industrial College of the Armed Forces

### Chapter II

while the course was in progress. He based his instructional plan on what he called "the case system." Students were assigned specific problems related to industrial mobilization and they were required to prepare their own solutions. From his experience with this first four-month course, Colonel Ferguson concluded that the "case problem" method was a sound approach and that it should be used in the future.

Various features of the instructional programs developed during the first few courses of the new college had a lasting influence. Prominent persons delivered lectures in the first course. As many as 29 lectures were delivered in the second course which opened on 2 September 1924 with 13 officers. This course also saw the introduction of student critiques and comments - a precedent for the later "Blue-Card System." In their initial comments the students recommended that the course be extended to at least a full academic year (10 months). Students also complained that too much time was spent in conferences - a persistent criticism repeated by subsequent classes.

In the critical early years of the Industrial College, its faculty was remarkably small. For example, in the third course which opened in February 1925 with 25 students, the faculty consisted of the Director, Colonel Ferguson, and three other officers. This course is also remembered for the first participation by Navy officers: Commander L. W. Jennings, Jr. (SC) and Commander D. C. Cather. All of the Army's Technical Services were represented in this course.

The program for Course Three used case problems in such areas as financing procedures, budgetary controls and specifications employed in the procurement processes. As much as possible, the lectures were related to the case problems. The committee system, informally used in the preceding course, was now formalized. Students were assigned to committees and subcommittees to work on various problems. A war game was introduced in the last week of the course - an exercise which consolidated the problems previously studied in the course.

The instructional program was lengthened to a full academic year of ten months in September 1926. The course that opened that month with 35 students made extensive use of committees and lectures to fill out the school year. Field trips were made to industrial plants and power stations in the Washington D.C. and Pittsburgh areas - an innovation that became a regular feature of the curriculum. In order to develop a broad perspective of the overall problems of industrial mobilization, a series of conferences on that subject area were planned in coordination with faculty

## History of the Industrial College of the Armed Forces

### Chapter II

members of the Harvard Graduate School of Business. Several Harvard faculty members were assigned to the Industrial College to help in the development of these conferences. The emphasis on curriculum planning in the 1926-1927 program provided a foundation on which to develop and refine the instructional program. With these developments the Industrial College began to attract more attention and gain more influence in the War Department.

#### B. Expansion of the Curriculum

The framework of the curriculum developed in the 1926-27 school year was refined and modified in subsequent years in a never-ending quest to enhance the usefulness and effectiveness of the program. During the 1927-28 term further efforts were made to develop the committee system. Where appropriate the results of committee activities were included in reports that were regarded as containing useful information for the War Department. Emphasis was placed on oral presentations by student officers. Visual aids were introduced and efforts were made to build a college library.

The lengthening of the academic year was accompanied by increased emphasis on military procurement problems. For orientation purposes students in the 1928-29 program were instructed in the procurement procedures of their branches of the War Department. With the benefit of this orientation, the students were better prepared to profit from the course. Eighteen school days were devoted to studying procurement methods employed by the various Service supply branches.

Soon after the Army Industrial College adopted the standard length academic year questions arose over the future direction of the institution. Until then the College had been preoccupied with military procurement and its student body was composed of officers who were directly concerned with that function. It was not until the 1928-29 term that the first Army line officers attended the College. Instruction in planning for industrial preparedness and economic mobilization, although recognized as central to the mission of the College, were given limited attention. Instead the focus was on immediate areas of concern.

A basic question examined in the 1929-1930 academic year was the kind of instruction that should be provided in military procurement. In that year a beginning was made in studying military procurement in a broad context. Was this the approach the College should pursue in the future? Or should more emphasis be placed on closer coordination with the Supply Branches by providing instruction in the more



## History of the Industrial College of the Armed Forces

### Chapter II

routine aspects of procurement and supply management? In answer to these questions the faculty members emphasized that the Army Industrial College should continue to function as a postgraduate school - as "an institution of research." This view prevailed; meanwhile a beginning was made in developing closer relations with the Army War College. This action reflected the desire of the faculty to develop a broader role for the College. Suggestions to extend the course to two years, however, were decisively rejected. The 1929-30 term was also noteworthy in that the college began active participation in industrial mobilization planning.

#### C. A Period of Growth

The Army Industrial College continued its slow but steady growth in the 1930s. Indicative of its progress were the expansion of the student body and the broadening of the curriculum. Within the War Department there was increased recognition of the value of the instruction provided by the College. Instruction in how to improve military procurement operations was especially appreciated in view of the austere budgets of the Military Departments. At the close of this decade, however, the College was still a one-Service institution with a limited mission.

The student body varied from 46 officers in the 1930-1931 academic year to a high of 62 in 1938-1939. A significant development was the growing interest of the Navy in the College. The Class of 1931 included ten Navy and one U.S. Marine Corps officer. Over a fourth of the Class of 1933 consisted of Navy and Marine Corps officers. Another development was the increasing number of students from the combat arms, starting with the Class of 1935.

The Navy also demonstrated its interest in the Industrial College by assigning a Naval officer to the faculty for the 1930-1931 academic year: LCDR Morton L. Ring, (SC). Later, in the 1937-38 term, both Navy and U.S. Marine Corps officers were members of the faculty. During most of the 1930's the faculty was relatively small. For example, in the 1932-1933 course, the faculty consisted of six full-time and seven part-time instructors and consultants. By 1938, however, the faculty had expanded to ten full-time members. That number was reached only after the Director had complained in 1936 that the faculty was much too small to conduct an effective program.

The educational program became somewhat more diversified after 1930. In the 1930-1931 curriculum, instruction in economics and business fundamentals was introduced because many students did not have sufficient background in those subjects to handle the case problems.

## History of the Industrial College of the Armed Forces

### Chapter II

Instruction in those fields was provided by graduates of the Harvard School of Business Administration. The 1931-1932 program included the study of economic factors affecting the military strength of leading nations. This was the start of what became a very rewarding phase of the curriculum. At this time a beginning was also made in developing a program of student and faculty research.

The curriculum continued to feature case problems, but the problems now required familiarity with business economics. In the 1932-1933 program, student conferences were expanded with more participation by representatives of government agencies and industry. More attention was now given to Naval procurement procedures and supply problems. The Navy and U.S. Marine Corps responded by assigning 13 officers to the next class. In another departure, increased liaison with the Army War College resulted in more Industrial College student attendance at lectures in that institution. Finally, in 1935-1936 the Army War College opened all of its lectures to students of the Industrial College.

American concerns over mounting international tensions after 1935 led to increased emphasis on military and industrial preparedness planning. Thus in the 1937-1938 program, the Industrial College gave more attention to the problems associated with planning for economic mobilization, and to the military capabilities of European and Asiatic nations. The following year the College became concerned over evident "deficiencies in the training of many officers in fields relating to procurement". To meet this problem the faculty planned to present two courses: one for junior supply officers that focused on the interrelationships between the Services in procurement operations, and an advanced course limited to officers with twenty or more years of outstanding service that included command and staff assignments. This ambitious plan was obviously unattainable at the time. The fact that the plan was developed illustrates the aspirations of the College - the view that it ought to be assigned a much more important role. Instruction should be provided at an advanced level and on a joint-Service basis.

#### D. Initial Reactions to World War II

The 1939-1940 term began two weeks after Nazi Germany launched its invasion of Poland. The Industrial College reacted promptly to the growing international crises which increased the likelihood that the United States might become involved in a global conflict. The College accelerated its program and focused attention on new and urgent priorities. Both faculty members and students worked on revisions of the annexes of the War Department's Mobilization Plan. Students

## History of the Industrial College of the Armed Forces Chapter II

were required to prepare reports on "Industrial Mobilization Plan, Revised, 1939" with emphasis on the estimated effectiveness of that plan for mobilizing the Nation's resources in support of a major war. A series of studies was prepared on economic warfare and on the availability of essential raw materials. Industrial field trips were made to plants now engaged in the production of military materials.

Following the conclusion of the regular term on 19 June 1940 the Industrial College prepared a condensed four-and-a-half month course. This action illustrates the sudden realization that the education provided by the College was very valuable and that there were not nearly enough Army Industrial College graduates for important mobilization assignments. The first Special Course which opened on 12 August 1940 had a very different kind of student body. An important new requirement was the training of military reservists called up to strengthen the Armed Forces. Thus 59 of the 75 members of this first short course were Reservists of all of the Services. Reservists also predominated in succeeding sessions of the Short Course. This sudden change temporarily interrupted the evolutionary development of the regular Industrial College course. The War Department now relied upon the College to provide urgently needed training in support of the mobilization of the Nation's military forces. These developments confirmed the convictions of the founders of the Industrial College that training in mobilization and industrial preparedness planning was important at all times and not just in an actual national emergency.

During the first special course, the students studied the Industrial Mobilization Plan, Revised, 1939. To save time, more use was made of conferences instead of case problems. An Economic Warfare Information Section was established to keep students informed on important happenings in a world at war. The Secretary of War later transferred this section to the Office of the Administrator of Export Control.

The fourth short-course class of 1941 graduated on 23 December - two weeks after Pearl Harbor. On the following day the Army Industrial College was inactivated and its personnel received other assignments. This official action applied to the regular program of the Industrial Colleges since the facilities of the College continued to be used for the short courses. The Library of the College also remained open but it was transferred to the Administrative Branch of the Under Secretary of War.

## History of the Industrial College of the Armed Forces

### Chapter II

For the next two years the Army Industrial College was officially inactive but this was merely an interlude. A parallel can be drawn with World War I. Participants in economic mobilization during that war became strong advocates of the importance of training officers for such functions in peacetime. To provide for such training they were instrumental in establishing the Army Industrial College. A similar process took place in World War II. At the height of this conflict certain military and civilian leaders were already looking ahead to the re-opening of the regular course of the Industrial College but this time on an expanded, joint-college basis. Meanwhile, the name of Army Industrial College continued to be used for the special short courses that had replaced the regular course.

In order to speed up the training of officers, the Special Course was shortened to four months starting with the term that opened on 2 January 1941. A noteworthy event was the appointment of a U.S. Marine Corps officer, Colonel Frank Whitehead as Director of the Army Industrial College. This appointment was made on the recommendation of the Under Secretary of War and with the approval of the Secretary of the Navy and the President of the United States. This episode was further evidence that the Army Industrial College was increasingly assuming<sup>2</sup> the characteristics of a joint-Service institution.

The Army Industrial College received extensive recognition and publicity from the wartime association of its name with the Special Courses. This development led to a broad acceptance of the college and to the support of plans to eventually re-open its regular course.

<sup>2</sup> Anonymous manuscript "The Army Industrial College: AIC - Example of Inter-service Cooperation", 1946 (in NDU Library).

## History of the Industrial College of the Armed Forces

### Chapter III

#### III. EMERGENCE OF THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

##### A. Initial Steps

During the height of the war, steps were taken to reopen the Army Industrial College to meet special training requirements. Many problems had developed in the administration of massive war production contracts. Even more problems were anticipated when the time came to terminate and renegotiate these contracts. It was anticipated that the termination of contracts would be a formidable and complicated task. The War Department consequently decided to reopen the College and assign to it the special mission of training military officers and Federal civilian employees in procedures for terminating and renegotiating war production contracts. Accordingly, the Industrial College was reopened on 28 December 1943 by War Department Circular no. 337. Colonel Francis H. Miles, Jr. Ordnance Department (ORD), was designated as the Commandant of the Army Industrial College - a position he had held previously, from August 1938 to November, 1940.

The first three-week course in contract termination began on January 3, 1944. The student body was composed of officers from the military Services, Federal civilian employees and representatives of major wartime agencies. The Navy was especially interested in these courses. During 1944, from 15 to 20 percent of the students were Naval officers, and in the summer of 1945 they constituted fully three-quarters of the student body. In 1944 six Naval officers became members of the faculty. The Navy sent so many of its officers because the Army course was well-established. Since the Army and the Navy had adopted joint contract termination regulations the subject matter of the courses met the needs of both Services.

By all accounts the special courses were very useful and resulted in substantial savings for the Federal Government. More than 4,700 students attended the courses. According to the brief history of the College, prepared for its twenty-fifth anniversary in 1949, "There can be no doubt that this activity represents one of the most useful services rendered by the college in its history, the savings to the government resulting from the work of the contract termination groups being beyond estimate."

<sup>1</sup> The Industrial College of the Armed Forces 1924-1949, Twenty-Fifth Anniversary 25 February 1949, p. 16.

## History of the Industrial College of the Armed Forces

### Chapter III

During the war, persons concerned with the many, and perplexing problems of economic mobilization became interested in re-establishing the regular course of the Army Industrial College. They believed that the lessons learned in World War II ought to be studied in the College, and that in a future war emergency the Nation should be better prepared to mobilize its economy in support of the Armed Forces. A leading proponent of this view was Brigadier General Donald Armstrong, USA who assumed the post of Commandant of the Army Industrial College on 1 September 1944 - the first general officer to be assigned to that position. He had previously served on the War Planning Board in the Office of the Assistant Secretary of War and had witnessed what he regarded as a complete disregard of the work of that Board when the Nation was plunged into World War II. He, too, was determined that in the future more emphasis be given to industrial preparedness. Officers assigned to economic mobilization positions should be trained for that role by a re-established Industrial College. Envisioned was not the continuation of the pre-war Army Industrial College but a joint-Service institution at the highest level in the military education system.

#### B. The Echols Board

While the Special Courses were in progress, planning began for reopening the regular course of the Industrial College. In addition to General Armstrong the impetus for the actions that led to the establishment of the Industrial College of the Armed Forces came from military and civilian leaders who were concerned over the way economic mobilization was conducted in World War II. The work of two War Department boards of officers prepared the way for the establishing of the Industrial College of the Armed Forces: The Echols Board convened on 27 November 1943 and the Hancock Board which held its opening session 15 June 1945. Both boards drew on their wartime experiences to evaluate the education of officers in the Armed Forces and how well this education had prepared officers for key roles in economic mobilization.

Both Boards emphasized that graduates of the Industrial College had played important roles in the war, but there were far too few such officers. The Echols Board focused its attention on a critical evaluation of the Army Industrial College as a preliminary step before planning the reopening of the College. The Hancock Board, after briefly reviewing the Army Industrial College experience, discussed at length the kind of College that should be established.

## History of the Industrial College of the Armed Forces

### Chapter III

The first of these boards was appointed by the War Department on 27 November 1943 "in connection<sup>2</sup> with the re-establishment of the Industrial College".

The Board was instructed to submit recommendations to the War Department on: the personnel for a permanent College Advisory Board; the War Department agency to be responsible for the administration of the College; location; qualifications of the Commandant; general outline of the curriculum; student qualifications and the size of the student body.

The members of the Board were:

Major General Oliver P. Echols, President  
Major General Russel L. Maxwell  
Major General Arthur H. Carter  
Major General Lucius DuB. Clay  
Brigadier General William F. Tompkins  
Brigadier General Walter L. Weible  
Colonel Francis H. Miles, Jr., Recorder  
Dean James H. Graham  
Mr. William L. Marbury

As recorded in its Proceedings the Echols Board analyzed the entire problem of instructing a sufficient number of officers in economic mobilization and procurement. Board members emphasized that the Army Industrial College before World War II had never been accorded the prestige it deserved. As a consequence, the College was handicapped by inadequate housing and equipment and insufficient faculty members (both instructors and research specialists). The student body was much too small.

The board members lauded the fine performance of Industrial College graduates in their wartime assignments but unfortunately, these were seldom the economic planning functions for which they were trained. In a paper prepared for consideration by the Board<sup>3</sup> its Recorder, Colonel Francis H. Miles, Jr. listed as a "glaring deficiency" of the Army Industrial College that it had failed to sell its product, the Industrial Mobilization Plan and related plans, to persons in high authority. As a result, according to Colonel Miles, "twenty years of planning went largely for naught so far as the national setup for controls was

<sup>2</sup> Memo, Adjutant General War Department (AG 352) to Major Oliver P. Echols, USA, 27 November 1943, sub: Board of Officers.

<sup>3</sup> Exhibit B. Data on Reopening Army Industrial College.

## History of the Industrial College of the Armed Forces

### Chapter III

concerned." This passage illustrates the view of some board members that the Industrial College should have done a better job of promoting and supporting its Industrial Mobilization Plan - a function which they regarded as implied in the mission of the College. The developers of this plan were very disturbed that their work had received so little recognition in World War II and they hoped that a re-established Industrial College would save future mobilization planners from such frustrations.

The Echols Board discussed at length the record of the Army Industrial College as a basis for developing recommendations for a reestablished College. General Armstrong used the 1936-1937 curriculum to illustrate what he regarded as serious deficiencies of the Army Industrial College. In that year several weeks were devoted to the fundamentals of business - a subject which he believed had no place in "the higher mission of the AIC." He described the curriculum as somewhat disconnected, elementary, unbalanced, and in the light of World War II, incomplete. According to General Armstrong "the course seems to have grown up without any definite attempt to provide a logical sequence of subjects studied. It omitted a great many subjects which the experience of this war has indicated are essential."

General Armstrong's criticisms of the Army Industrial College was made from the vantage point of World War II. He did not recall that in the period between the two global conflicts the possibility of another such war was regarded as most unlikely. Isolationism was widely supported and peace movements attracted many adherents. It is difficult to document the impact of prevailing anti-war attitudes on the intensity and quality of instructions in economic mobilization and industrial preparedness. The emphasis given to those subjects should never be relaxed, regardless of prevailing public attitudes. As General Armstrong pointed out, the Nation should not lower its guard at any time.

The failure in the past according to General Armstrong was that not enough emphasis was given to such training. This was illustrated by the subordinate role assigned to the Industrial College. "I feel that the College never had the consideration or the prestige that it deserved." To illustrate this point he stated that the College never had a commandant of higher rank than Colonel until his own appointment to that post.

Like the Industrial College, the Planning Branch in the Office of the Under Secretary of War also lacked prestige, and little attention was given to the War Plans which it



## History of the Industrial College of the Armed Forces

### Chapter III

developed. General Armstrong pointed out that the two situations were related to each other. He expressed his disappointment that so little recognition was given to the work of the planners. He told the Echols Board that "it is annoying for all of us officers who were engaged in the study and preparation of an industrial mobilization plan to think of the long years spent on it, only to have it neglected or even discarded in this war". General Armstrong blamed himself and the other planners for not having circulated the mobilization plan more widely - for not developing in industry and labor, confidence in the ability of the Planning Branch of the Office of the Assistant Secretary of War. The first model of the Army's Industrial Mobilization Plan prepared in 1930 and its later renditions never commanded much attention.

General Armstrong recommended the establishing of a joint "Army - Navy Industrial Staff" which would have training as one of its functions. He also favored continuing the Industry Advisory Committees as a source of information especially on problems encountered in the war. He emphasized that it was important to develop ways, through seminars or other vehicles, to draw together the views of all persons concerned with industrial mobilization as a means of diagnosing and solving the troublesome problems encountered in World War II. He looked to the reestablishing of the Industrial College as a vehicle for profiting from wartime experiences in industrial mobilization.

The Echols Board was of the opinion that the Industrial College should be controlled by the War Department General Staff. The Commandant should be a general officer who was a graduate of the Army Industrial College and preferably, also of the Army War College. The instructional staff should be greatly enlarged and a professional research staff of officers and civilians should be established. With regard to the student body, the Board recommended the total enrollment of 425 students apportioned to a proposed two-level educational program. The Board also recommended opening the College to qualified civilian members of the Department of State and other Federal departments with defense-related functions.

The Echols Board's report to the War Department recommended the establishment of a Permanent Advisory Board to the Commandant, Army Industrial College. The reopened College should be controlled by the War Department General Staff. The Commandant should be a general officer, a graduate of the College and preferably also of the Army War College and of a recognized business college. The first courses to be offered should be in the fields of finance,

## History of the Industrial College of the Armed Forces

### Chapter III

material management and contracts. The list of specific recommendations concluded with the proposal that "authority be granted to the Commandant, Army Industrial College, to secure the necessary personnel and do the necessary research work to establish the permanent College." No target date was set for reopening the College.

Not all of the recommendations of the Board were accepted but an immediate result of its work was the assignment of additional personnel to the College and the forming of a nucleus of professional specialists. In response to the Board's recommendations, about 30,000 square feet of floor space in the Pentagon was allocated to the College - a substantial improvement over previous space allocations.

General Armstrong as well as other proponents of a strong professional research capability in the Industrial College were instrumental in the establishing of the Department of Research on 7 March 1941. The establishing of this department, composed almost entirely of professional civilians, represented a radical departure from the usual organizations of the College. Headed by Colonel Walter H. E. Jaeger, JAGD, the Department initiated a series of detailed research projects on significant aspects of the economic side of World War II. It also concerned itself with plans for the future of the College.

#### C. The Hancock Board

The appointment of a second board to prepare for the reopening of the regular course of the Industrial College resulted from an understanding between the Secretary of the Navy, James Forrestal, and the Secretary of War, Henry L. Stimson, late in 1944. In a letter to Secretary Stimson dated 29 November 1944, Secretary Forrestal wrote:

"I feel that the War and Navy Departments should set up at this time adequate courses of instruction in Logistics which will be available to officers in the sister services. I further feel that these courses must be devised in such a manner that they will fully meet both the common needs of all services and the peculiar needs of each service, and that in arranging them, there should be a minimum overlap of effort, time and facilities."

Secretary Forrestal suggested that the Secretary of War and the Secretary of the Navy appoint a board of three Army officers, three Naval officers, and three civilians to consider the subject of "logistic training" in the Army and the Navy. Secretary Stimson agreed to this proposal and instructed Brigadier General Donald Armstrong, Commandant of

## History of the Industrial College of the Armed Forces

### Chapter III

the Army Industrial College, to meet with a representative of the Navy to draft a precept for consideration by the board. The precept should include ". . . recommendations for the implementation of the understanding" between the Secretary of the Navy and the Under Secretary of War "whereby the Army Industrial College would become the Army and Navy Industrial College." Since the Under Secretary of War was responsible for industrial mobilization, Secretary Stimson asked him to take responsibility for determining with the Secretary of the Navy the composition of the board and the scope of its activities.

The precept for a "postwar joint educational system in the field of industrial mobilization production, and closely related subjects" developed by General Armstrong and his Naval counterpart, Captain Lewis L. Strauss, opened with general assumptions that reflect the thinking of the proponents of a reconstituted Industrial College. The precept assumes that

"d. A future war will test the planning and performance of industrial mobilization far more severely than has the present conflict. Plans must be made for a faster start and a stronger finish. Technology will facilitate and accelerate aggression and an enemy of an economic stature equal to or greater than our own may attack this country".

"e. Consequently, Army and Navy procurement planning and procurement must be more closely integrated than in the present war. The Army and Navy must look beyond the limits of departmentalism and cooperate with other government and civilian agencies in working out, before hostilities begin, an overall coordination of our war<sup>4</sup> effort capable of meeting the requirements of total war."

These general assumptions were in line with views held before the advent of nuclear weapons. They also reflect the growing support for close Army - Navy cooperation. The precept recommended a two-year joint training program at the postgraduate level. Officers of the Army Technical Services and their Naval counterparts should receive one year of basic joint training in a preliminary course covering a wide range of subjects related to economic mobilization. Graduates from that course would be selected to attend the Industrial College. The name of the institution should be changed to "The Army - Navy Industrial College."

<sup>4</sup> Memo, Commandant of the Army Industrial College to the Secretary of War, 12 April 1945, sub: Precept for Board on Postwar Army - Navy Training in Industrial Mobilization.

## History of the Industrial College of the Armed Forces

### Chapter III

The War Department representatives selected for the Board on Postwar Training in Industrial Mobilization were:

Brigadier General Hugh C. Minton  
Brigadier General Edward M. Powers  
Colonel Gordon E. Texton  
Mr. John M. Hancock  
Mr. Ormund E. Hunt

Department of the Navy appointments were:

Vice Admiral William S. Farber  
Rear Admiral William J. Carter  
Captain Lewis L. Strauss  
Mr. Joseph W. Powell, Jr.

The Board on Postwar Army - Navy Training in Industrial Mobilization was convened on 15 June 1945 and again on 26 July 1945. As its first action the Board named Mr. John M. Hancock as its chairman. According to General Armstrong, the role of the Board was to consider the interim mission (the next two years) of the Industrial College. It would be premature, he stated, to attempt to define the permanent mission of the Army - Navy Industrial College "before we have analyzed and evaluated the lessons of this war and before we have organized our knowledge in such a way that we can effectively indoctrinate officers<sup>5</sup> in the principles of a new industrial mobilization plan".

Like the Echols Board, the Hancock Board began by evaluating the performance of the Army Industrial College. General Armstrong repeated the critical analysis of the Industrial College which he had presented to the Echols Board. His strategy appeared to be to build a case for giving much more support to the College when it was reconstituted. Later in the Board's deliberations he stressed the important contributions made by the College - contributions which were largely unrecognized. He remarked that "I feel that the College<sup>6</sup> never had the consideration or prestige that it deserved".

As he had done while a member of the Echols Board, General Armstrong linked the lack of prestige of the Industrial College with the low regard for the work of Planning Branch in the Office of the Secretary of War. He looked to the reopening of the Industrial College as a

<sup>5</sup> Proceedings of the Conference of the Board on Postwar Army-Navy Training in Industrial Mobilization June 15, 1945, pp.1 and 2.

<sup>6</sup> Ibid. pp. 8 and 9.

## **History of the Industrial College of the Armed Forces**

### **Chapter III**

stronger, more vital institution, as a means for meeting both problems.

The report of the Hancock Board submitted on 18 February 1946 opened by defining the mission of the Army Industrial College and evaluating efforts to carry out that mission. With regard to the quality of instruction "graduates interviewed are unanimous in their opinions that the course gave them a background of inestimable value particularly when they were assigned to procurement operations". The students received more than a utilitarian education. They learned that war is the business of the entire nation. Students received an understanding of the relationship between strategy and the nation's economic resources.

The Army Industrial College, however, was able to train only a small proportion of the Army and Navy officers assigned to procurement functions in World War II. From February 1924 to June 1940 the College graduated 672 Regular Army, 88 Navy, and 24 Marine Corps officers. The short course (four months) introduced in 1940 graduated 338 Army, 42 Navy and 6 Marine Corps officers - an overall total of 386 graduates. These numbers were much too low in view of the fact that more than 25,000 Army and Navy officers were assigned to procurement duties in World War II.

In summarizing its findings on the past performance of the Army Industrial College, the Hancock Board report concluded that the instruction provided was of great value in preparing officers to perform and to supervise procurement operations. The report emphasized that the Industrial College course also helped to break down departmental barriers in procurement operations. The annual reports of the Assistant Secretary of War 1934 to 1939 stressed the "truly cooperative spirit between the officers of the sister services as fostered in the Army Industrial College". The report again stressed that the College trained far too few officers and that many more reservists should have been enrolled.

Instruction provided by the College was essentially on target but many important subjects were not adequately covered because of time constraints. Also, the students did not have enough time for significant research. The College also did not develop enough contacts with industry, labor and professional and scientific organizations. These were deficiencies that the College should remedy.

The introductory statement to the Board's recommendations quoted from testimony by Army Chief of Staff General Eisenhower to a Congressional Committee on 15

## History of the Industrial College of the Armed Forces

### Chapter III

November 1945 cautioned that "... we must train to avert World War III, not to refight World War II. We must be pre-eminent in technical research and industrial mobilization." The Industrial College must contribute to saving time at the outbreak of a war. Immediate mobilization of maximum industrial strength is essential for fighting of future wars. Every effort must be made in time of peace to perfect an organization that will speed the marshalling of the nation's strength. This admonition set the stage for specific recommendations by the Board.

Heading the list was the recommendation that the name of the Army Industrial College be changed at once to "The Industrial College of the Armed Forces (ICAF)." This formulation was the outcome of a long debate among the members of the Board. At one point General Armstrong admitted that the word "Industrial" in the title did not appeal to him but he supported the Board's decision. Next was the recommendation that the Industrial College of the Armed Forces be established on the same level as the Army and Navy Staff College. Preferably, ICAF should be physically associated with the Staff College so that instruction in strategy and in industrial mobilization could be coordinated as much as possible.

A recommendation agreed upon only after a long discussion would require ICAF to offer a preliminary course, to be designated as Course I. This course would cover basic subjects essential for preparing officers for procurement assignments. It should be given to a minimum of 200 officers at two or more civilian institutions near large industrial centers. Selected graduates of Course I should be assigned to industrial plants for a year or more to acquaint them with production problems.

The student body should be composed of selected graduates of Course I as well as other regular and reserve officers and qualified civilians from government departments and agencies. Short courses should be provided for reservists and qualified civilians.

General Armstrong's strong views led to the recommendation that the College's Department of Research "be expanded to carry out all essential research in the field of the College's activities. This is as important and vital to our national security as is the generally recognized need for scientific and technical research." The Board also encouraged the establishing of advisory committees to the Industrial College from industry, labor, the social sciences and scientific and professional bodies.

## History of the Industrial College of the Armed Forces

### Chapter III

The Board concluded its recommendations by expressing its deep concern that:

"The prestige of the Industrial College and of its graduates and of the essential nature of work in industrial mobilization both in peace and in war must be more fully recognized. Only in this way will officers of professional competence be willing to be transferred from purely military and naval activities to the vital work of industrial mobilization. Furthermore, the Commandant of the Industrial College of the Armed Forces should be either a general officer of the Army or a flag officer of the Navy in order that the college may enjoy a prestige commensurate with its mission and equal to other military and naval educational institutions."

The Board's concern addressed the most basic and persistent problem encountered by the Army Industrial College, namely, how to obtain the level of prestige that was a prerequisite for adequate support. The Hancock Board hoped that the new Industrial College would not have to face this handicap.

The report concluded with the Board's fervent, almost evangelical support of preparations and training for economic mobilization. This support had to go far beyond the reestablishment of the Industrial College, otherwise the work of the College would be ineffectual. In its recommendations for policies connected with industrial mobilization the Board cautioned that:

- "1. This report would be incomplete if it failed to point out the futility of training for industrial mobilization without adopting certain measures that the Board considers essential and desirable. The Board therefore, unanimously recommends:
  - (a) That the various supervisory civilian agencies should exist in skeleton form in time of peace so that the relationship between the Armed Forces and these agencies will be firmly established in time of peace. This organization should be provided by statute at an early date ...
  - b) That in order to ensure competent and adequately trained personnel, specialization in procurement and procurement planning should be required in the Armed Forces starting approximately after the first ten years of a commissioned officer's service ... measures should be instituted to ensure that

## History of the Industrial College of the Armed Forces

### Chapter III

promotion of officers so engaged shall not be retarded by reason of such assignment ... "

The Hancock Board members agreed that the permanent course of the Industrial College could not be plotted until two or more years after the conclusion of the war. On the other hand the members were unanimous in their opinion that the re-established Industrial College had to be a joint service institution. They held this view even though the military services had not yet been brought together in the new Department of Defense.

#### D. The New Industrial College of the Armed Forces

Early in 1945 with the end of the war in sight, a decision had to be made as to the future of the Army Industrial College. The special courses in contract termination were expected to end soon - possibly by the close of the year. After that, what should be the mission of the Army Industrial College? General Armstrong's answer was that the college should reopen with an interim mission. He submitted his rationale for such a mission to the Under Secretary of War on May 25, 1945.

He reasoned that after the defeat of Japan, many months would pass "before the economic system of the country is readjusted and the Federal Government and the Armed Forces reorganized on a permanent basis". Meanwhile the College's Departments of Instruction and of Research should devote at least two years to the study of industrial mobilization in World War II before they attempted to plan a permanent course of instruction. He therefore recommended the introduction of an interim course of six months. Instruction would consist of lectures by leaders from industry, organized labor, government agencies and the Armed Forces. These lectures should be recorded for future use. Student officers selected because of their wartime experience would be assigned to committees that would assemble and evaluate data in the various fields included in the curriculum. The student body should include a large number of senior officers of the Technical Services. During the interim program the main objective of the Department of Instruction should be the accumulation of data on industrial mobilization in World War II. General Armstrong's plan was adopted and preparations were made to implement it early the next year.

7/ Memo, Commandant, Army Industrial College to Under Secretary of War, through Assistant Chief of Staff, G-3, 25 May 1945, sub: Interim Mission, Department of Instruction, Army Industrial College.



## History of the Industrial College of the Armed Forces

### Chapter III

The first interim course of six months opened on 4 January 1946 with 81 students, including 18 Naval and 1 Marine Corps officers. There was little distinction between faculty and students. All were given an opportunity to express their views on postwar problems of demobilization and on national defense in the light of World War II experiences. The course brought together the personal observations of officers and civilians who had participated in the war. General Armstrong established a number of Industry Advisory Committees to strengthen the ties between the College and the nation's industries. These committees conducted a series of seminars - a program that was copied by the Army and Navy Munitions Board in 1947.

While the Interim Course was under way, the Army Industrial College became the Industrial College of the Armed Forces. This change resulted from an agreement between the Under Secretary of War and the Assistant Secretary of the Navy dated April 11, 1946 and published in War Department Circular no. 130 on May 3, 1946. The War Department retained its housekeeping responsibilities for the institution. The selection of the Commandant of the Industrial College of the Armed Forces and his principal assistants would be made by the Under Secretary of War in agreement with the Assistant Secretary of the Navy. As expected, Brigadier General Donald Armstrong, USA, was designated as Commandant and Captain E. R. Henning, USN and Colonel Robert W. Brown, USA, as Assistant Commandants.

That the Industrial College would become a joint service institution was hardly a surprise. Almost from its beginning the Industrial College had accepted Naval officers as students on equal terms with Army officers. In time a few Naval officers were appointed to the faculty and as previously noted, in 1941 Colonel Whitehead, a U.S. Marine Corps officer had briefly served as Commandant of the College. Army-Navy cooperation in procurement training and operations was especially close in World War II. Thus the official establishment of the Industrial College of the Armed Forces was the logical development in a well-established trend toward a joint institution.

Arrangements for the opening of the first regular postwar course were announced by War Department Circular 91 on March 3, 1946. Scheduled to open on 3 September, 1946 the course would have a duration of 10 months. The Under Secretary of War determined the student quotas to be assigned to the military Services and the major commands. The introductory phases of the course were to be offered in conjunction with the Army and Navy Staff College. The rest of the course was to consist of committee studies, lectures and visits to industrial plants. Students were to be

## History of the Industrial College of the Armed Forces

### Chapter III

selected from regular Army officers with the temporary rank of Major or above with an efficiency rating of "superior" and less than age 45, for the grade of Colonel and above, and not over age 40 for Majors and Lieutenant Colonels. Similar qualifications applied to the selection of Naval officers.

The opening of the first regular postwar course on September 1946 marked the dawn of a new era for the Industrial College. Never before had the College been provided with such generous resources. The instructional staff and the Department of Research together totalled 66 officers and civilian professionals. Finally the College had the resources for devising a more comprehensive and better curriculum and it now had a much larger student body - a total of 81 officers that included 62 from the Army, 18 from the Navy and 1 from the U. S. Marine Corps. Contrary to previous planning, however there were no Federal civilians in the class of 1947.

On 1 July 1946, two months before the Industrial College opened its doors to its first postwar class, General Armstrong was succeeded as Commandant by Brigadier General Edward B. McKinley, USA. General Armstrong had played a key role in planning the reopening of the College and in shaping its curriculum. He was a principal architect of the modern Industrial College of the Armed Forces.

An important event was the move of the Industrial College to new quarters in Fort McNair in August 1946. The move to Tempo 5 made it a close neighbor of the new National War College. It brought together the two highest level colleges in the Defense Establishment - a situation that was mutually beneficial. This move soon led to the start of the spirited but good-natured athletic rivalry between the two colleges. In later years many of the events in that rivalry were recalled (and often embellished) at alumni gatherings and on other occasions.

The initial postwar regular course had a completely new curriculum that was fitted into the familiar pattern of problem solving, committee and subcommittee activities, lecture attendance and the preparation of reports. The lecture program benefitted from presentations by officers and civilian executives who had been directly involved in economic mobilization and industrial production in World War II. Proximity to the National War College enabled the two institutions to coordinate their lecture programs. In fact, during the 1946-1947 academic year Industrial College students attended about 75 percent of the National War College lectures.

## **History of the Industrial College of the Armed Forces**

### **Chapter III**

Field trips were re-established but on a more extensive basis. Visits were scheduled for a wide range of industries in major cities. Students were assigned to small groups each with its own itinerary and accompanied by faculty members.

The 1946-1947 academic year thus was an eventful one for the Industrial College of the Armed Forces. The school year was begun in new and roomier quarters with an expanded faculty and student body and with a new curriculum. This first year, however, was largely a trial run. The Industrial College still faced the tasks of building a new curriculum that would be in tune with postwar conditions and requirements and of developing a suitable organizational structure. These proved to be formidable, never-ending problems.

The first organizational change was not long in coming. The Department of Research was eliminated in May 1947. At the same time, eight instructional branches were established in the Department of Education.

The second postwar course opened in September 1947 with a student body of 115 officers. The newly established U.S. Air Force was represented by a number of student officers equal to that of each of the other two Services. Members of the Air Force were also assigned to the Faculty. Provisions were made in the course of instruction to reflect the changes in the National Military Establishment, brought on by the National Security Act of 1947. Meanwhile, in view of increasing world tensions more emphasis was given to surveys of international trends and conditions.

The Industrial College was not content with resuming instruction in economic mobilization for regular officers of the Military Services. Such instruction was also regarded as important for military reservists. The contributions of civilians in uniform in World War II were well-remembered. A Reserve Instruction Branch was established in May 1947 to present a condensed version of the College's economic mobilization course to Military Reserve and selected National Guard Officers. The course schedule covered two weeks of five days each with four hours of activities programmed for each day. Participants were selected by Army Area headquarters, Naval Districts and Air Force Commands. National Guard officers were chosen by the Chief of the National Guard Bureau on the recommendations of the State Adjutant General; civilian participants were selected by local civilian committees established by the local Armed Forces commanders.

## History of the Industrial College of the Armed Forces

### Chapter III

The initial course opened in New Orleans in January 1948 with the assistance of instructors from the ICAF faculty. The course was presented in 17 cities during the 1948-1949 period. Total attendance for this initial series of courses included 224 Army, 285 Naval and 136 Air Force officers as well as 476 civilian executives and other interested civilians. This marked the beginning of a rapidly expanding external program designed primarily for military reservists nationwide.

Several organizational and personnel changes were made following the enactment of the National Security Act of 1947. Major General Arthur W. Vanaman, U.S. Air Force was designated as Commandant on 1 April 1948. The Army and the Navy each provided a Deputy Commandant, and General Vanaman represented the U.S. Air Force. In other changes a Division of Plans and Administration was established and placed under the direction of a Deputy Commandant. A new Division of Education was set up in the Office of the Director of Instruction.

The year 1948 was a memorable one for the Industrial College. In that year the College was raised to the highest educational level in the Military Establishment following agreements of the Joint Chiefs of Staff with the Secretary of Defense. In a memorandum to Secretary of Defense James Forrestal the Joint Chiefs of Staff on 18 August 1948 gave their concurrence to the report of an ad hoc committee that had been appointed to consider the advisability of "reconstituting the Industrial College of the Armed Forces". The Joint Chiefs of Staff also recommended that they be permitted to issue a charter for the Industrial College. Secretary Forrestal on 31 August 1948 approved the draft charter and remarked that "its prompt issuance was highly desirable". He also agreed that "for the time being, the fiscal arrangements for, and the administrative maintenance of the college, should remain a responsibility of the Army", Secretary Forrestal concluded by expressing the desire that the JCS, in their periodic review of the college curriculum "consult<sup>8</sup> with and obtain the suggestions of the Munitions Board". Following the approval of its recommendations by the Secretary of Defense, the Joint Chiefs of Staff on 3 September 1948 informed the Commandant of the Industrial College that the College is "hereby reconstituted as a joint educational institution operating under the direction of the

8 Secretary of Defense (Forrestal) Memorandum to the Joint Chiefs of Staff, 31 August 1948, sub: Reconstitution of the Industrial College of the Armed Forces.

## History of the Industrial College of the Armed Forces

### Chapter III

Joint Chiefs of Staff and subject to the terms of this Charter ... ." <sup>9</sup> With this change the Industrial College finally was granted the recognition it had desired for so long. The College now faced the challenge of developing an educational program that reflected its new status.

#### E. Establishment of the Board of Advisors

Civilian leaders have always played an important role in the development of the Industrial College. Government officials with responsibilities for supporting the Armed Forces in World War I were very concerned over the problems of industrial mobilization. Their concern was instrumental in establishing a college for instructing military officers in how to cope with such problems. Once established, the Army Industrial College profitted from the support and counsel of government officials, industrialists, and military leaders who understood the importance of instruction in mobilization for war and economic preparedness. In the early years of the Army Industrial College these leaders frequently acted as consultants and delivered lectures to the student body. The Army Industrial College recognized the contributions of a number of these leaders by appointing them as honorary faculty members. Later the Industrial College named its new building Eisenhower Hall, and its auditorium the Baruch Auditorium. The close association of the Industrial College with business leaders, educators, scientists, and other prominent civilians continued throughout the history of the Army Industrial College but it was not formalized in a Board of Advisors until 1944 shortly before the establishment of the College as a joint educational institution. During these early years one of the staunchest supporters of the College was Bernard M. Baruch, the former Chairman of the War Industries Board.

The formal advisory body grew out of the Department of Research established by the Commandant of the Industrial College, Colonel Francis H. Miles Jr. ORD, in 1944. In conjunction with that action, Colonel Miles late in 1944 appointed a new Research Council of five members, four from industry and one a prominent economic consultant. The Commandant soon transformed this Council into a Board of Advisors. The new board's membership was gradually expanded by the inclusion of leaders from industry, education, law, and other fields. In making their appointments to the Board of Advisors the successive Commandants usually retained members who were willing to continue their service. The

<sup>9</sup> JCS Memorandum for the Commandant, Industrial College of the Armed Forces, 3 September 1948, sub: Reconstitution of the Industrial College of the Armed Forces.

## History of the Industrial College of the Armed Forces

### Chapter III

list of prominent persons who served on the Advisory Board during its early years included such strong supporters of the Industrial College as J. Carlton Ward, Ferdinand Eberstadt, Dr. Edward A. Fitzpatrick and John M. Hancock. <sup>10</sup>

<sup>10</sup> In 1949 the Board of Advisers had 18 members. For a listing of the membership see ICAF publication "The Industrial College of the Armed Forces 1924-1949 - Twenty-Fifth Anniversary, 25 February 1949," p. 22, and American Ordnance Association publication "The Industrial College of the Armed Forces - Thirty-First Anniversary, 1955" p. 14. (both in the NDU Library).

## History of the Industrial College of the Armed Forces

### Chapter IV

#### IV. THE FORMATIVE PERIOD 1948 - 1962

##### A. A College at the Highest Level: The Problem of Prestige.

The reconstitution of the Industrial College in September 1948 as a joint educational institution operating under the direction of the Joint Chiefs of Staff presented a formidable challenge. A completely new senior military College had to be built - one for which there was no model that could provide guidance. There was no doubt that the new institution would be far different from its predecessor, the Army Industrial College, with its restricted focus on economic mobilization and industrial preparedness. In its new form, the Industrial College faced the challenge of determining what would be the most appropriate educational program based on its mission - a program to help prepare senior officers for their future responsibilities. Officers frequently needed more educational background than that provided by their respective Services to cope with advances in military technology and related problems in the management of defense resources. They had to be prepared for participating in joint and combined operations and to meet the changing requirements of national security. From the outset the new Industrial College faced the problem of gaining acceptance for its program from the Military Establishment. The Army Industrial College had faced a similar problem when it sought acceptance for its instruction in economic mobilization. Basic changes in the structure of officer education have always encountered resistance - resistance based on the fear that attendance at a military educational institution that was new and not traditional would adversely affect career advancement.

The newly reconstituted Industrial College consequently faced the perplexing problem of how to attain the prestige it deserved because of the importance of its mission. This problem had several interrelated facets. A fundamental consideration was the widely-held perception that somehow the Industrial College was at a lower level than the National War College. This perception persisted despite repeated statements by the Joint Chiefs of Staff that the two institutions had co-equal status and that they complemented each other. Furthermore, identical criteria were used in selecting students for the two colleges. This perception, according to an ICAF Commandant, Lieutenant General George W. Mundy in his 1961 report to the Joint Chiefs of Staff "seriously impairs the motivation of students to attend the Industrial College". Over the years, the Industrial College steadily gained wider acceptance, although concern over prestige continued to persist.

## History of the Industrial College of the Armed Forces

### Chapter IV

A fundamental problem - one directly linked with the prestige of the College - was that of the misleading impressions conveyed by the name "Industrial College". Successive Commandants expressed their dissatisfaction with that name and recommended that a more appropriate one be adopted. Similar views were expressed by the Board of Visitors. In his final report to the Joint Chiefs of Staff, General Mundy, in 1961 observed that "the Industrial College has long had to combat the adverse effects resulting from misleading impressions conveyed by its name. The term "Industrial College" inherited from an earlier era, and an educational mission long ago superseded, suggests a course content and a type of instruction which bear little resemblance to the broad, graduate-level curriculum now offered by the College. It has helped to create a widespread impression among the armed services that our curriculum is concerned with the "nuts and bolts" of logistics and military procurement, with adverse consequences for student motivation and the prestige of the institution." Repeated efforts over the years through staff studies and other means, failed to obtain agreement on a more appropriate name for the institution. As the years went by, the name "Industrial College of the Armed Forces" became so firmly established that the likelihood of a change has become very remote.

The completion of the new ICAF building in 1960 was an important moral factor. It seemed to provide visible evidence to support the JCS formulation that the two colleges at Fort McNair had equal status. Early in 1961 the Department of Defense appeared to cast serious doubts on this presumption of equality by its disapproval of the recommendation for assignment of three-star rank to the position of Commandant. This action appeared to seriously lower the prestige and standing of the Industrial College in the joint educational system. General Mundy informed the JCS that he regarded this action as a serious impairment of the prestige of the College. In December 1961, Deputy Secretary of Defense Roswell Gilpatrick recommended restoration of the three-star billet to be accompanied by a proposed "reorientation" of the Industrial College that would add "prestige and new responsibilities to the Commandant." Much to the relief of the College the three-star billet was restored in January 1962.

Since those early years of the Industrial College of the Armed Forces the prestige of the College steadily increased. Continuing emphasis on developing and increasing the effectiveness of the curriculum brought the College wider recognition and acceptance. With the growing attention given to the management of defense resources the College provided instruction in areas of great concern to



## History of the Industrial College of the Armed Forces

### Chapter IV

the Defense Establishment. These developments provide the background for reviewing<sup>1</sup> the history of the Industrial College since 1948.

#### B. Evolution of the ICAF Charter; The "Capstone" Concept.

The reconstituted Industrial College of the Armed Forces was placed at the same level in the military educational system as its Fort McNair neighbor, the National War College. Both Colleges were concerned with the educational preparation of future leaders in the field of national security but they did so through different approaches. The two institutions differed in that the National War College had a political-military orientation. It dealt largely with international relations and national military strategy. The Industrial College program by contrast emphasized the economic and industrial aspects of national security. Thus while both Colleges provided broad coverage of the entire spectrum of national security problems and issues they did so with separate missions and contrasting curriculums. The important role of each College came to be widely recognized. The role assigned to the Industrial College is expressed in its charter - a document that was frequently modified in order to keep in step with changing formulations and perceptions of national security requirements.

The charter approved by the Secretary of Defense on 31 August 1948 opens with the basic statement that "The Industrial College of the Armed Forces is reconstituted as a joint educational institution operating under the direction of the Joint Chiefs of Staff. This institution is recognized as being on the highest level in the educational field within the National Military Establishment".

The mission of the Industrial College was defined as:

"a. To prepare selected officers of the Armed Forces for important command, staff and planning assignments in the National Military Establishment and to prepare selected civilians for important industrial mobilization planning assignments in any government agency, by:

(1) Conducting a course of study in all phases of our national economy and interrelating the economic factors with political, military and psychological factors.

<sup>1</sup> The annual reports submitted by the Industrial College to the Joint Chiefs of Staff provide information on developments during the 1948 - 1962 period.

## History of the Industrial College of the Armed Forces

### Chapter IV

(2) Conducting a course of study in all aspects of joint logistics planning and the interrelation of this planning to joint strategic planning and to the national policy planning.

(3) Conducting a course of study of peacetime and potential wartime governmental organizations and the most effective wartime controls."

The charter provided that the Office of the Commandant rotate between Army, Navy and Air Force officers appointed by the Joint Chiefs of Staff. Also, "there will be two Deputy Commandants of flag or general officer rank, one appointed from each Service other than that of the Commandant." Representation of the Services on the faculty and staff should be "approximately equal" with<sup>2</sup> the total number to be determined by the Commandant.

According to the charter the regular course of instruction was to be about ten months in duration. Further, "the College will also conduct courses for officers of the National Guard, Reserve Officers of the Army, Navy and Air Force and selected executives of industry, educators and prominent citizens. This will consist of a condensed version of the regular course and will be conducted either at the College or in cities throughout the country by members of the faculty of the College".

Total student enrollment and quota allocations for the Services and National Security Resources Board civilian officials were to be determined annually by the JCS acting on recommendations of the Commandant.

This initial charter reflects the strong influence of World War II experiences, especially in the emphasis on economic mobilization and related planning functions. In the years that followed the charter was frequently modified or revised. This was inevitable since there was no one best way for the College to carry out its mission. For its part, the Industrial College, as best it could, tried to be responsive to changing requirements in its broad mission field. It attempted to provide appropriate and timely instructions tailored to the needs of a diverse student body with a wide range of backgrounds. The emphasis given to being responsive to changing defense educational interests and requirements was a factor in charter revisions and

<sup>2</sup> "Charter for the Industrial College of the Armed Forces," Enclosure B, Joint Chiefs of Staff Memo for the Commandant, Industrial College of the Armed Forces, 3 September 1948, sub: Reconstitution of the Industrial College of the Armed Forces.

## History of the Industrial College of the Armed Forces

### Chapter IV

curriculum development. In addition to providing guidance to the College the charter was helpful to the Joint Chiefs of Staff in carrying out their supervisory responsibilities. Some charter revisions, on the other hand, originated in planned curriculum changes which would benefit from JCS support.

Comparisons of successive charter revisions show a trend toward a broader educational program that went far beyond the initial concern over industrial preparedness planning and economic mobilization. There was a growing trend to give more attention<sup>3</sup> to the management of defense resources and related areas. Eventually this subject area became a dominant theme in the curriculum.

The first charter revision dated 19 April 1949 authorized the conducting of courses for officers of the National Guard, Reserve Officers of the military Services and selected executives of industry, educators and prominent civilians. Total student enrollment and the allocations of student military spaces to the Services and civilian spaces to government agencies including the National Security Resources Board (NSRB) were to be made annually by the Joint Chiefs of Staff acting on the recommendations of the Commandant.

The first charter revision on 19 April 1949 made no basic changes. A second charter revision on 14 June 1951 dropped the National Security Resources Board from the student allocation procedure. The section on student enrollment stated that:

"The Joint Chiefs of Staff acting on the recommendations of the Commandant, shall annually determine the total student enrollment including that of the correspondence course in economics."

The procedures for determining total student enrollment and the allocation of student spaces to the Services and to government agencies were spelled out in detail. Criteria for the selection of civilian students were to be comparable to those followed by the Services for military officers. The Commandant of the Industrial College was responsible for selecting civilian students.

A charter revision in July 1955 dropped the differentiation between military and civilian students. The new formulation directed that their "common training" prepare them "for important policy making, command and staff

<sup>3</sup> Staff Study, 16 February 1960, sub: ICAF Charter Revisions and Changes.

## History of the Industrial College of the Armed Forces

### Chapter IV

assignments within the national and international security structure." Previous mission statements had specified the training of military personnel for assignments in the Department of Defense and civilians for "industrial mobilization planning assignments in any government agency".

The charter revision of July 1960 specified that ICAF should emphasize the interrelationship of economic and industrial factors in the formulation of national policy. The mission of the College according to this revision was:

"To conduct courses of study in the economic and industrial aspects of national security under all conditions, giving due consideration to the interrelated military, logistical, administrative, scientific, technological, political, and social factors affecting national security, and in the context of both national and world affairs, in order to enhance the preparation of selected military officers and key civilian personnel for important command, staff, and policy-making positions in the national and international security structure."

This restatement of the College's mission in the words of the Commandant, Lieutenant General George W. Mundy, USAF, confirmed "the broad lines along which the<sup>4</sup> curriculum had developed over the past several years."

The Joint Chiefs of Staff were inclined to question the need for three separate senior joint-service colleges, The National War College, The Industrial College of the Armed Forces and the Armed Forces Staff College. Were these Colleges so different as to warrant their separate existence? There was no obvious answer to this question.

Prior to the 1960 ICAF charter revision, the Chairman of the Joint Chiefs of Staff requested the Joint Military Education Committee (composed of the Commandants of the three Colleges) to examine the missions of the three institutions. The committee was requested to consider the possible restatement of the missions of the Colleges "to more accurately reflect the differences in scope of instruction as well as the different purposes for which each school was established." Their study should include recommendations for more economical use of facilities. The Joint Military Education Committee responded that it was unable to coordinate the curricula of the three Colleges.

<sup>4</sup> Commandant, ICAF (Mundy) Memo for the Joint Chiefs of Staff 30 June 1961, sub: Operations of the Industrial College of the Armed Forces During Fiscal Year 1961.

## History of the Industrial College of the Armed Forces

### Chapter IV

A very significant revision of the ICAF charter was formulated in the winter of 1961-1962. To some extent, this revision was related to the decision to return to the College the three-star billet for the position of Commandant which had been lost early in 1961. In December of that year, in association with his recommendations for the restoration of the three-star billet, Deputy Secretary of Defense Roswell Gilpatrick proposed a "reorientation" of the College that would, among other things, provide more "prestige and new responsibilities" to the Commandant. He suggested that the ICAF charter and curriculum be changed to "place increased emphasis on instruction in the management of our total resources for war." Although political and military matters were not to be ignored the College should focus "on those complex problems of defense logistics involving the management of men, money, and materials." The resulting change in emphasis enabled ICAF to win recognition "as the capstone of our military schools in management and logistics." This impressive phrase became one of the best known descriptions of the Industrial College, even though there was some uncertainty as to how "capstone" should be interpreted.

The Joint Chiefs of Staff concurred in Mr. Gilpatrick's recommendation that a broad review of the College's charter and curriculum be undertaken. The result was a new charter for the College developed through close coordination between the Industrial College and the Joint Staff. The charter reflected the view that the changes recommended by the Deputy Secretary of Defense called for a shift of emphasis rather than a major revision of the curriculum. The principal change in the new charter, approved in February 1962, consequently, was the increased emphasis on the study of the management of resources for national security.

The charter opens by describing the Industrial College not only as "a joint educational institution operating under the direction of the Joint Chiefs of Staff," but also as the "capstone of our military educational system in the management of logistic resources for national security." In conformity with this definition a brief but significant change was made in the first clause of the charter by the inclusion of the underscored words, as follows:

"To conduct courses of study in the economic and industrial aspects of national security and in the management of resources under all conditions ..."

The 1962 charter revision was a landmark in the history of the Industrial College in that it marked the beginning of a new orientation of the College. Henceforth, more emphasis was given to defense management, and more specifically, to

## History of the Industrial College of the Armed Forces

### Chapter IV

the management of defense resources. Shortly after the issuance of the 1962 charter, the curriculum was subjected to a thorough revision which was not completed until five years later. These changes gave real meaning to the description of the Industrial College of the Armed Forces as the "capstone" of the defense military educational system in the management of defense resources.

#### C. 1962

The organizational structure of the Industrial College like its curriculum, was relatively stable during this period (1948-1962). In 1954 the Commandant (RADM W. McL. Hague) was served by three advisory bodies: The Board of Advisors, the Policy Council and the Student Council. The Executive Officer was responsible for administration, the ICAF Library, security, and support functions. Each of the two major divisions of the College was headed by a Deputy Commandant. The primary role was that of the Deputy Commandant, Education. He carried out his responsibilities for conducting the instructional program through six branches: the Economic Potential; Manpower; Requirements; Procurement, Production, and Mobilization branches. The Deputy Commandant, Extension Courses, was served by two branches: the Civilian Reserve Branch and the Correspondence Study Branch.

The following year (1955) the Executive Officer was replaced by the Assistant Commandant (Administration) who headed the new Administrative Division. At the same time, the two major components of the College were designated as the Education Division and the Extension Courses Division. The instructional program became the responsibility of a Vice Deputy Commandant who, in turn, was assisted by the Director of Instruction.

By 1962 the organizational structure of the Industrial College had become considerably more complex. In addition to the Board of Advisors, the Commandant was now assisted by the Department of State Advisor and by the Senior Educational Advisor who was also the Director of Instruction. A new Textbook Development group reported to the Senior Educational Advisor, although the instructional materials it prepared were used primarily in the School of Extension studies. The two major components of the College in 1962 were the School of Resident Studies and the School of Extension studies - each headed by a Deputy Commandant of

<sup>5</sup> The Annual Reports submitted by the Industrial College to the Joint Chiefs of Staff include organizational charts and describe organizational changes.

## History of the Industrial College of the Armed Forces

### Chapter IV

two-star rank. Finally, the Administrative Division was now the Administrative Department headed by the Executive Officer.

The School of Resident Studies consisted of the Economic Capabilities Division and the Resources Management Division. A Faculty Board, chaired by the Deputy Commandant, provided policy guidance, and a Curriculum Committee headed by the Director of Instruction, developed the curriculum of the Resident Course. The School of Extension Studies was composed of the National Security Seminar Division which conducted two-week seminars for reserve officers and selected civilians and the Correspondence Course Division which served a similar clientele. The lectures in the Seminar Program were reviewed by the Curriculum Committee in the School of Resident Studies. The Correspondence Course was also based on the Resident Course. It used textbooks prepared by a Textbook Development Group which was responsible to the Senior Educational advisor.

D.

#### 1. The Trend Toward Larger Classes

The size of the ICAF student body increased steadily during the 1948 - 1962 period. The class of 1962 totalled 162 students compared to 124 graduates in 1951. The number of Army students ranged from a low of 39 in the class of 1952 to a high of 46 in the class of 1954. Comparable figures for the Navy were a high of 42 officers in the class of 1958 and a low of 32 in the class of 1951. U.S. Marine Corps students changed very little, ranging from 5 to 7 officers annually. As for the U.S. Air Force, it was represented by a high of 43 officers in the class of 1962 and a low of 35 in 1958. The largest increase was in the number of civilian employees due to the increasing concern of Federal departments and agencies with national defense matters. The class of 1962 had 28 Federal Civilian Employees as compared to only 8 in the class of 1951.

The trend toward larger classes was viewed with misgivings by the Commandant, Vice Admiral Rufus E. Rose. In his 1962 report to the JCS, Admiral Rose remarked that the student body increased from 149 in 1961 to 162 in 1962. Although this increase was absorbed without undue strain, the Commandant was concerned over the effects of this trend. He pointed out that "in 1948 - 49 the College had 112 students and a faculty of 42. In 1962 - 63 its student body will have grown to 180 while its faculty will have dwindled to 38". He reasoned that the senior joint colleges operated on the theory "that an intimate and informal faculty-student relationship, small-group discussions and

## History of the Industrial College of the Armed Forces

### Chapter IV

instruction, and an academic atmosphere . . . are indispensable to the educational needs these colleges exist to serve . . . A crowded campus is not a suitable 'finishing school' for senior officers who, in the coming decade, may shape policy and make decisions crucial to our nation's security. An educational program that becomes each year a little more standardized, impersonal and routine gradually loses its capacity to stimulate and inspire . . . For all these reasons, I have recommended that 180 students be recognized as the maximum number that can be adequately housed and, more<sup>6</sup> important, educated, in the manner we should expect".

The recommendations of Admiral Rose did not lead to an end to the growth trend. Whether the continuation of this trend had in any way impaired the effectiveness of the ICAF program as predicted by Admiral Rose would be hard to document. Unanswered was the question: what should be the maximum size of the ICAF student body? Should the emphasis be on numbers and cost effectiveness or on the quality of the educational experience that ICAF provided to its students?

#### 2. The Selection of Students

A major concern of the Industrial College was that the Services select as students officers with outstanding potentials for leadership. In his 1955 report to the Joint Chiefs of Staff, the Commandant Rear Admiral W. McL. Hague, raised the issue of "appropriate selection of students for the Industrial College of the Armed Forces." He reasoned that because the opportunity of attending the College could be granted to only a relatively small number of senior officers, no one should be selected who did not have the potential for flag rank. He also argued that officers who attended the College should not be permitted to retire within five years after their graduation. The Commandant made these recommendations to the JCS because he felt that the Services had not always adhered to such standards.

The problem of student qualifications and selection was again addressed in the Commandant's report to the Joint Chiefs of Staff on the operations of the Industrial College in FY 1957. The Commandant, Major General R. P. Hollis, USA, stated that he fully concurred in the recommendation of the Baxter Board Report, 22 January 1956, that each ICAF class "include a proportion of graduates of each Service War College." The adoption of such a policy could raise the

6/ Industrial College of the Armed Forces, Report to the Joint Chiefs of Staff on Operations During Fiscal Year 1962, pp. 5 and 6.



## History of the Industrial College of the Armed Forces

### Chapter IV

level of attainment even if only a small number of Service College graduate were included in the student body.

General Hollis expressed his conviction that better results would be obtained by the College if it had a relatively homogeneous student body in terms of rank and experience. He noted that the years of "Promotion List Service" in the Class of 1958 ranged from 13 years to 24 years per student.

Another problem that troubled General Hollis was the imbalance in the ratio of line and staff officers in the student body, especially Army officers. He attributed this situation to "a misconception prevalent in some quarters of the services, and frequently in the minds of students as they enter the college ... that the Industrial College is essentially an advanced logistics school." General Hollis emphasized that "it should be recognized that a broad comprehension of the economic aspects of national security with their related political, administrative, and social facets is fully as important to the senior commander as to the senior officer largely concerned with logistics operations." For this reason he considered it important that the student body be balanced between officers whose main background was command and operational assignment with those whose experience was mainly in staff duties or in the technical and logistics fields. The Baxter Board had recognized this problem in its 1955 report.

General Hollis recommended to the Joint Chiefs that they issue new and detailed guidance to the Military Services for the selection of students for the Industrial College. He presented the following guidance proposals:

Age: Approximately 42 years

Rank: Colonel or senior Lieutenant Colonel and Navy counterparts.

Service Experience: The main consideration should be on quality. Selectees should have demonstrated their potential for selection to flag rank.

Education: Graduation from a Senior War College was desirable but not essential. A substantial number of students should be graduates of such colleges. Other selectees should, as a minimum, be holders of baccalaureate degrees or be graduates of the line school of their Service.

Line/Staff Distribution: A minimum of one-third of the students from each Service should be line officers.

## History of the Industrial College of the Armed Forces

### Chapter IV

In their response to these recommendations, the Joint Chiefs stated that they did not regard "the imposition of restrictive student selection criteria upon the Services" as appropriate. The problem of student selection, according to the Joint Chiefs was only one of the problems that the Services had<sup>7</sup> to consider in planning for worldwide personnel commitments.

E.

Unlike a civilian university, a military college had to be guided by a clearly defined mission usually in charter form in developing its instructional program. In the newly reconstituted Industrial College, educational objectives were directed toward imparting the kind of knowledge and background information that would prepare officers for positions of increased responsibilities. The educational program had to be broad enough to encompass the interests of officers with very different backgrounds and prospective future assignments. Although the program covered many facets of national security it was never designed to develop expertise in any specific subject area. Fundamentally, of course, the College had the important purpose of fostering leadership - an objective that did not lend itself to a well-defined methodology. Thus in the absence of a model that could be followed, the Industrial College had to devise an instructional program that best reflected its mission. In the never-ending processes of curriculum building, a consensus of different views was often required and at times, what was desired had to give way to what was feasible.

#### 1. A Broadening Trend

The economic focus of the Resident Course was a heritage from the pre-World War II period. The Army Industrial College had recognized the growing importance of economic factors in conducting a war; it had stressed economic mobilization planning and preparations in peacetime and the gearing of industries to meet military requirements during a general war. This economic focus was again evident in the reconstituted Industrial College as it developed its curriculum to meet changing national defense requirements. This focus was maintained as the College attempted to keep its programs in step with increasingly complex national defense requirements.

<sup>7</sup> JCS Memo (SM-811-57) for the Commandant, Industrial College of the Armed Forces, 20 November 1957, sub: Industrial College of the Armed Forces Report to the Joint Chiefs of Staff on Operations During Fiscal Year 1957.

## History of the Industrial College of the Armed Forces

### Chapter IV

Perceptions as to essential requirements for national security and how best to prepare officers to meet these requirements underwent a series of changes after 1946. In the immediate postwar years the importance of economic factors in the conduct of a war was widely recognized. The first concern of the nation's leaders was with the lessons of economic mobilization demonstrated by the problems encountered in World War II. For several years after the war, consequently, the ICAF curriculum emphasized the problems and procedures of mobilization for a general war of the character and dimensions of World War II. The growing intensity of the Cold War after 1948 and the development of a nuclear weapons capability by the Soviet Union however posed a new and serious threat to national security. In the ensuing military buildup the Industrial College faced the challenge of determining the most suitable instructional program for preparing military officers to cope with increasingly complex responsibilities.

Military preparedness after 1948 was concerned with widely different types of warfare. In addition to a traditional general war or limited war fought with conventional weapons, the possibility now existed of either a mutually destructive nuclear world war or of a nuclear war of limited scope. How should the Defense Establishment prepare for such contrasting types of warfare and where should major emphasis be placed? There were no easy answers to such questions.

Changing world conditions and developments influenced concepts of military preparedness - concepts that influenced the ICAF curriculum. An early concern was economic support of the war in Korea which began in 1950. The military buildup associated with that war placed increased demands on the American economy. This led to concern over a "limited" or "grey" mobilization of the American economy. A related concern was the problem of meeting and checking the threat of worldwide militant communism. Overshadowing these concerns was the ever-present threat of a nuclear holocaust as the Soviet Union built up its atomic weapons inventory.

In the Industrial College the Resident Course was subjected to continuous internal review. For example, in 1957, the Commandant, Major General R. P. Hollis, USA led a critical self-appraisal of the objectives, curriculum and educational methods of the Resident Course. In his report of this appraisal to the Joint Chiefs of Staff, General Hollis noted that world conditions and rapid advances in military technology had led to a continuing shift of emphasis and broadening of the curriculum. Since the nature of a future war is never clear, the course of study took into account all possibilities, including the need for

## History of the Industrial College of the Armed Forces

### Chapter IV

instant readiness. This reasoning led General Hollis to question the feasibility of the traditional approach to economic mobilization. In fact General Hollis suggested that the concept of "economic mobilization" was overtaken by events and that consequently the description of the Resident Course had to be revised. He reported to the Joint Chiefs of Staff in 1957 that "because of restricted breadth and its connotation of Post M-Day action the term 'economic mobilization' was discontinued as reflecting an appropriate description of the Resident Course." He explained that "economic mobilization" was no longer "fully descriptive of the course" and was misleading. For these reasons the use of the term was discontinued on 2 July 1956. After that the course was simply called "The Resident Course of the Industrial College of the Armed Forces". General Hollis concluded with the observation that "never has the future seemed less clear"!

This uncertainty as to the future may have been a factor in the gradual decline of emphasis on economic mobilization that marked the late 1950s. At the same time, the curriculum was broadened by giving more attention to management in the Department of Defense and to a better understanding of other nations. By the early 1960s the Resident Course was emphasizing the application of management principles in the Department of Defense and with the management of defense resources.

The framework for the ICAF curriculum and the methods of instruction changed very little before 1952, but course content and the relative emphasis placed on different subject areas were frequently modified to reflect trends in national security concepts and issues. As stated by the Education Division in its 1951 report, the instructional program was based on the most efficient means for presenting the most effective course possible. On the whole, the ICAF curriculum was remarkably stable, especially in the period 1950 - 1962. What changes there were were of minor significance such as new labels for the same subject matter, or a reordering of the sequence of units.

The Education Division in the 1950 - 1951 term had the following six teaching branches.

- Manpower
- Economic Potential
- Requirements
- Procurement
- Production
- Mobilization

## History of the Industrial College of the Armed Forces

### Chapter IV

Two other branches, the Technological Progress and the Contributory Factors Branches were eliminated at that time.

Subject matter for the course was organized in units that varied in number from 12 to 9. The areas covered by these units changed very little from year to year but the contents of each unit were frequently revised or modified. In the 1951 - 1952 academic year, the curriculum had the following units:

#### UNITS

I	Orientation
II	Economics
III	Natural Resources
IV	Manpower
V	Requirements
VI	Procurement and Economic Stabilization
VII	Production
VIII	Public Services
IX	Distribution Logistics
X	Economic Potential
XI	Joint Strategic - Logistic Planning
XII	Mobilization

The unit on joint strategic-logistics planning was introduced in the 1950 - 1951 school year in order to carry out ICAF mission requirements. An interesting development in that academic year was the increased emphasis given to management and executive skills. In subsequent years there was a gradual expansion of this subject area until it appeared to eclipse the traditional emphasis on economic mobilization. By 1962, major attention was given to the study of management in the Department of Defense. This and other changes in subject matter were associated with a continuing broadening of the curriculum. This trend eventually reached areas of interest that also approached the curriculum of the National War College.

Several national developments in the decade 1946 - 1956 affected the evolution of the ICAF curriculum. The reorientation and reorganization of national defense within the new and broadened concept of national security outlined in the National Security Act of 1947 and its amendments led to more attention to the basic role of economic factors in the conduct of war. More specifically the growing intensity of the Cold War and the start of hostilities in Korea in the summer of 1950 led to the "limited" or "grey" mobilization of the American economy to meet rising military requirements. This development came very soon after the completion of post-World War II demobilization.

## **History of the Industrial College of the Armed Forces**

### **Chapter IV**

With these developments economic mobilization moved from a planning stage to a limited operational phase. In the views of some observers, however, the most significant development was the buildup of nuclear weapons. In an all-out war, the decisive phase probably would be ended within a few weeks. The outcome of such a war, consequently, would seem to depend chiefly on the state of military readiness and the stocks of military equipment available when hostilities began. Such concerns were offset by views that an all-out nuclear war was most unlikely. It was essential, therefore, to continue to prepare officers for positions of responsibility in the kind of economic mobilization needed to support a wide range of contingencies, from a general (non-nuclear) war to a conflict of limited scope.

In a structural change introduced for the 1959 - 1960 academic year, the nine units of the course were assigned to four broad topics. The curriculum for that year, consequently, had the following profile:

#### **A. FOUNDATIONS**

##### **I. Foundations**

#### **B. THE NATIONAL SCENE**

##### **II. National Security Objectives and Requirements**

##### **III. Resources**

##### **IV. Materiel Management**

##### **V. Economic Stabilization**

#### **C. THE INTERNATIONAL SCENE**

##### **VI. Contemporary International Politics**

##### **VII. Economic Capability for International Conflict**

##### **VIII. International Field Studies**

#### **D. PLANS AND READINESS**

##### **IX. Plans and Readiness**

A major change occurred in the lecture program for the 1959 - 1960 academic year. For some subject areas in the curriculum, the Industrial College had relied on having its students attend National War College lectures. These lectures were primarily in the areas of international relations, foreign policy, strategy and warfare, and

## History of the Industrial College of the Armed Forces

### Chapter IV

national security policy. This appeared to be an excellent arrangement but it created problems as to timing, emphasis, and approach. In his comprehensive plan for 1959 - 1960, Dr. Marlin S. Reichley stated that in order to develop a better integrated and coordinated course of study, it was decided to absorb those subject areas into the ICAF curriculum. This would overcome the problem that the National War College lectures were not in the sequence of the subject matter in the ICAF curriculum. This decision applied to as many as fifty National War College lectures.

Mobilization studies constituted the concluding unit through the 1956 - 1957 academic year. The following year it was replaced as the final element of the curriculum by a unit on Plans and Readiness. In succeeding years through 1962 this unit retained its position as the windup of the academic year. Other changes included the introduction of two new units in 1954: Unit VII, Distribution Logistics, and Unit XI, Joint Strategic Logistic Planning. The following year the number of units was reduced from 12 to 9. A glance at the academic year 1961 - 1962 curriculum reveals that there were few really basic changes from the curriculums of the preceding decade.

The Resident Course was organized as follows:

#### A. FOUNDATIONS

##### Units

##### I. Foundations

#### B. THE NATIONAL SCENE

##### II. National Security Policies, Programs and Budgets

##### III. Resources

##### IV. Materiel Management

##### V. Economic Stabilization

#### C. THE INTERNATIONAL SCENE

##### VI. Contemporary International Politics in the World Economy

##### VII. Economic Capability for International Conflict

##### VIII. International Field Studies

<sup>8</sup> Dr. Marlin S. Reichley, "ICAF Curriculum 1959-1960: 'Year of Fundamental Change'".

## History of the Industrial College of the Armed Forces

### Chapter IV

#### D. PLANS AND READINESS

##### IX. Plans and Readiness

A review of curriculum developments during this period indicates that there was a continuing broadening process. At the same time, the main objectives of the ICAF course became more blurred. As the initial focus on economic mobilization and industrial preparation for war weakened, it was not replaced by a similar well-defined purpose. It was not until the 1960s that major emphasis was placed on instruction in defense management. Such a development was foreshadowed by the increasingly important role of military leaders as managers.

With regard to methodologies, the instructional program was characterized by heavy reliance on lectures. The lecture program included presentations sponsored by the Industrial College, and lectures sponsored jointly with the National War College. In addition, ICAF students attended certain lectures sponsored solely by the National War College. A persistent criticism of the ICAF courses was that students spent too much time listening to lectures. As a result the number of lectures was reduced somewhat during the period 1949 - 1962. For example, in the 1948 - 49 academic year, students attended 267 lectures (149 sponsored by ICAF and 118 by NWC). In the 1961 - 62 term 184 lectures were scheduled (153 by ICAF and 31 jointly with the National War College).

Seminars played an important role in the ICAF course. Outside experts drawn from industry and government met with small groups of students to discuss principal topics within the various units of the curriculum. For example in the 1961 - 1962 academic year, 26 seminars were scheduled for Unit IV, Materiel Management. In these seminars some 56 outside experts covered a wide range of American industries. The seminar sessions provided students the opportunity to benefit from the knowledge of experts in many areas of the national economy and the Federal Government. Generally the seminar program was highly regarded. Sometimes students served as moderators in the seminar sessions.

A standard practice was to organize student committees - one for each unit of the curriculum. Within each committee students could be asked to prepare individual written reports or to contribute to the committee's report. In addition, usually each student was required to present an oral report of from 12 to 15 minutes to the assembled student body and faculty. In the 1950 - 1951 academic year, for example, each student wrote on five committee problems,



## History of the Industrial College of the Armed Forces

### Chapter IV

prepared four individual reports, and made one oral presentation. All students were required to take a course in public speaking, usually consisting of ten periods.

The Industrial College emphasized the advisory role of faculty members. In order to develop that role a new system of faculty associates was initiated in the 1950 - 1951 academic year. Faculty members were assigned as associates to groups of students. Their role was to serve as advisors and motivators. Each associate was expected to meet informally with his students throughout the school year.

The Industrial College was concerned that its courses would present a real challenge to its students. The College did not want to develop the image that it was a "gentleman's school." One obvious way to insure that students would put forth their best efforts was to introduce course examinations. It was also obvious that students would recoil from such a move. As an experiment, a test was administered to the ICAF students in June 1951. The stated purpose of this venture was to test the feasibility of examinations as a means of gauging student progress. No attempt was ever made to repeat such an experiment!

The Industrial College was always concerned over the value students placed on their year at the College. Such information could provide guidance in the continuing efforts to increase the effectiveness of the curriculum. For example, in 1950-51 students participated in three evaluation exercises designed to measure the effectiveness of the course of instruction. The practice developed of concluding each unit with a student evaluation of that unit.

#### F. The Baxter Board

The Joint Chiefs of Staff from time to time undertook studies of the three senior joint Colleges for which it was responsible. One such instance was the decision of the Joint Chiefs on 7 April 1954 to appoint a National War College - Industrial College of the Armed Forces Survey Board composed of two prominent civilians and four general or flag officers. The Board was asked to conduct a survey of the two institutions "in order to relate and give direction to these colleges in the system of higher military education." Its recommendations would assist the Joint Chiefs "in formulating guidance for these joint Colleges".<sup>9</sup>

<sup>9</sup> JCS Memorandum for Commandants National War College and Industrial College of the Armed Forces, 7 April 1954, (SM-313.54) sub: National War College and Industrial College of the Armed Forces Survey Board.

## History of the Industrial College of the Armed Forces

### Chapter IV

The following persons were appointed to the Board:

Dr. James Phinney Baxter III, Chairman  
Mr. J. Carlton Ward, Jr.  
Admiral J. L. Hall, Jr. USN (Ret)  
Major General James A. Stuart, USMC  
Major General Lawrence R. Dewey, USA

Since this was the first such survey since the establishment of the National War College and the reconstitution of the Industrial College, the Board reviewed the historical development of both institutions. It also took into account the role of these institutions in post-war efforts to achieve the unification of the Armed Forces. The Board observed that the proponents of unification had realized that the attainment of this goal would not depend on legislation alone, but to a large measure on the education received by military personnel. The Board quoted a 1948 report of the Eberstadt Committee to the Hoover Commission that:

"The real and basic hope for true unification must come from within and not from without. It is a product of the heart and mind and spirit."

This passage, according to the Board, reflects the motivation for the creation of the Armed Forces Staff College and the National War college in 1946. According to its advocates, unification of the Armed Forces had to be supported by more emphasis on joint education at the highest levels in the Military Establishment. Likewise the role of the United States as leader of the Western World and as a member of NATO gave increased importance to joint and combined operations. There were growing demands for senior officers who were qualified to staff new international agencies - officers who understood the political, economic and scientific complexities of the modern world. This demand for such officers and the recognition of the gap in military education above the Army Command and Staff College at Fort Leavenworth contributed to the reconstituting of the Industrial College, the re-establishment of the Army War College, the revitalization of the Naval War College and the increased emphasis placed by the Air Force on its Air War College as part of its Air University.

Almost from the start, questions arose as to how the various military colleges would relate to each other. A plan for coordinating higher education in the Armed Forces approved by the Joint Chiefs of Staff in 1949 was not strictly followed. Subsequent criteria by the Services for the selection of students for the Industrial College and the National War College favored their own insititutions. The

## History of the Industrial College of the Armed Forces

### Chapter IV

Army, for example, decided that attendance at a joint institution or any Service war college would preclude any later assignment to another institution. The Navy ruled that graduates of the Naval War College were not available for attendance at a joint college and the Air Force cut back on the number of graduates of its War College who were assigned later to the Industrial College or the National War College. These policies prevented officers who had received the highest level of education in their respective Services from benefiting from the broader outlook provided by the joint institutions.

A major concern of the Survey Board was that the two Colleges did not give sufficient attention to joint and combined operations. According to the Board, the increased emphasis on combined staffs and operations implicit in the creation of the United Nations, NATO and SEATO should be reflected in a restatement of the mission of each of the joint colleges. Their mission statements should emphasize instruction in combined and joint operations. The Board presented this concern as its first recommendation. To illustrate its point, the Board drafted a recommended mission statement for each college. The statement for the Industrial College called for no major changes other than the recommendation as to joint and combined operations. The Board's proposed mission statement for the Industrial College provided that "The Mission of the Industrial College of the Armed Forces is to conduct a course of study in:

- a. all phases of our national economy and in the inter-relations of the economic factors with political, military and psychological factors;
- b. joint logistic planning and the relation of this planning to joint and combined strategic planning and to national policy planning;
- c. peacetime and potential wartime governmental organizations and the most effective wartime controls".

The purpose of the course was "to prepare selected officers of the Armed Forces for important command, staff and planning assignments in the Department of Defense and to prepare selected civilians for important economic mobilization planning assignments in any governmental agency."

On the question of the relationships of the two colleges to each other, the Baxter Board recommended that the two institutions continue to operate separately. Both schools provided their members "with a good understanding of the national and international factors concerned with the security of the United States." The Industrial College

## History of the Industrial College of the Armed Forces

### Chapter IV

emphasized the economic aspects of national security problems; the National War College the military-political aspects. The Board held that "the reasons which led the Joint Chiefs of Staff to reject previous proposals to merge these two Colleges are valid today and will remain so during the foreseeable future. Consolidation might well dull the cutting edge with which these separate entities hew to the line of their respective roles and missions. This risk outweighs in our opinion the small savings in money or personnel which might be effected by merger".

The two Colleges, consequently, should continue to "hew to the line" of their respective roles and missions. The Board, however, urged the two Colleges to continue and to intensify their cooperation and the integration of their activities. The views of the Baxter Board on the issue of consolidation was far from being the last word on this subject as was demonstrated by subsequent events.

How did the Senior Joint Colleges relate to the Service War Colleges? In examining this question the Board did not believe that there was excessive duplication. The Service Colleges have specialized functions as the highest educational institutions of their respective Services. The Joint Senior Colleges, on the other hand, provide an approach to the "joint and combined problems which arise in the postwar world." In a world that has become increasingly complex, higher-level officers need the education provided by both kinds of military colleges.

The Board saw the need for establishment of a Joint Educational Committee that would be on a par with other JCS committees. Composed of the Commandants of the three joint Colleges the committee should study the major problems of joint and combined education on a continuing basis.

The Baxter Board made a number of specific recommendations for the selection of students to attend the joint colleges. Each NWC and ICAF class should include "a proportion of graduates of each Service War College". Moreover, an increased proportion of the student body of the Industrial College should consist of line or combat officers who will be eligible for field commands. Both joint Colleges should continue to foster participation in their courses of officials from civilian agencies.

The Board also showed its concern for raising the prestige of the Industrial College. It recommended "that the positions of the Commandant and Deputy Commandant of the Industrial College of the Armed Forces be increased in rank to those of the corresponding officers of the National War College and the Armed Forces Staff College". Finally the Board

## History of the Industrial College of the Armed Forces

### Chapter IV

recommended that high priority be given to the construction of a new building to house the Industrial College.

#### G. A New Building for the Industrial College.

When the Industrial College was reconstituted in 1946 it was assigned to a temporary building at Fort McNair, Building T-5. Constructed in 1942, the building was expected to have a useful life of five years. From the start, the building presented both physical and psychological problems. Physically, the building lacked many essential facilities and was undergoing serious deterioration. Psychologically, students at the college developed the impression that their institution was inferior to the National War College. Although by definition the two institutions were on a par, the sharp contrasts in facilities appeared to contradict that definition.

Almost from the start efforts were under way to obtain approval for the construction of a new building to house the Industrial College. The Commandants of the Industrial College in their annual reports to the Joint Chiefs of Staff recommended that such approval be granted. It was not until 1960, however, that the college finally obtained the longed for new building.

In his FY 1954 report to the Joint Chiefs of Staff on the operations of the Industrial College, Rear Admiral W. McL. Hague reported that definitive plans for a new college building were completed but funds for its construction were deleted from the 1955 budget. Another request (for 5 1/2 million dollars) for this construction was resubmitted for inclusion in the FY 1956 budget. In support of this request the Commandant reported the results of an engineering survey of Building T-5 made at his request. The survey report concluded that Building T-5 had deteriorated to the point where maintenance costs were excessive and the continued usefulness of the building was "definitely limited." In support of this conclusion the report itemized a number of engineering deficiencies, such as warping, twisting, settling, and termite infestation.

In his report, the Commandant emphasized that apart from the building's obvious deficiencies, there was another important consideration.

"The National War College and the Industrial College of the Armed Forces, the two top-level schools of the Armed Forces' educational system, are situated physically side by side at Fort McNair. The National War College occupies a large permanent structure which was an outstanding example of the architectural design of the period in which it was

## History of the Industrial College of the Armed Forces

### Chapter IV

built. The Industrial College occupies an obviously dilapidated temporary building not constructed originally for the use to which it is being put. Military students of the two colleges are drawn from selected officers of about the same grade and achievements of the three Services. The few civilian students occupy similar positions in various executive agencies of the government. The dissimilar quality of the facilities available to the two Colleges creates in the minds of the students of the Industrial College of the Armed Forces, the false impression that their college is on a lower level than the National War College. This erroneous impression has far-reaching and detrimental results to the mission of the Industrial College."

Admiral Hague concluded that he had discussed the problem of the new building informally with President Eisenhower. The President said that in his judgment, a new building to house the Industrial College was necessary.

The approval in FY 1956 of an appropriation of \$250,000 for the preparation of final plans was an important first step but a \$3.8 million item for the new building was deleted from the Military Construction Budget before it was submitted to Congress. Prepared under the direction of the Washington District Corps of Engineers, the final plans for the new building were completed late in 1957.

Finally, in FY 1959, funds were appropriated for the new building. The ground breaking ceremony for the new building was held on 17 December 1958. The College could now look forward to obtaining the kind of facilities it needed and desired.

The dedication of the new academic building of the Industrial College of the Armed Forces on 6 September 1960 was a memorable occasion. The principal speaker was President Eisenhower; other speakers were the Commandant of the Industrial College Lt. Gen. George W. Mundy, Major General James Dreyfus, USA, the President of the ICAF Alumni Association, J. Carlton Ward, the Chairman of the Board of Advisors and General Lyman L. Lemnitzer representing the Joint Chiefs of Staff.

The participation of President Eisenhower as the principal speaker at the dedication ceremony was especially appropriate in view of his long and close association with the College. As an Army Major, he had graduated from the Army Industrial College in 1933, and had maintained his interest in the College throughout his military career. Before delivering his formal dedication remarks the President commented that "this structure is a far cry from the humble habitation of the old army college with which I was

## History of the Industrial College of the Armed Forces

### Chapter IV

identified in the early thirties, just as the atomic age, curriculum of this year's class is far removed from the course of study in the College almost three decades ago". He credited the growth of the College to a few civilians "who had a great vision," especially Mr. Bernard Baruch.

In a memorable passage of his formal speech President Eisenhower stated that:

"Our liberties rest with our people, upon the scope and depth of their understanding of the spiritual, political, and economic realities which underlie our national purpose and sustain our Nation's security. It is the high mission of the Industrial College of the Armed Forces to develop such understanding among our people and their military and civilian leaders. So doing, we will make the wisest use of our resources in promoting our common defense. The Industrial College has been a guidepost pointing to the greatly increased quality of our defense capacity; it must continue to point to an ever-ascending progress for the years ahead."

The first two sentences of this passage were later inscribed in the entrance hall of the new building and the building itself received the name of "Eisenhower Hall." Mr. Bernard Baruch was also remembered later by assigning his name to the auditorium of Eisenhower Hall.

H.

In the concluding phase of World War II, when preparations were underway to reopen the regular course of the Industrial College, steps were also taken to reach a wider clientele. Problems encountered in supporting the nation's war effort had impressed on key officials the importance of indoctrinating civilian leaders in the problems of economic mobilization. This task was assigned to the Industrial College. The revised charter of 1955 included, in the ICAF mission, the responsibility to "conduct course for officers of the National Guard, Reserve Officers of the Army, Navy and Air Force, and selected executives of industry, educators and prominent citizens". The Industrial College consequently established an extension program to make available a condensed version of the Resident Course to selected military Reserve officers on two-week active duty for training and to civilian leaders. Subsequent charter revisions contained similar statements.

Responsibility for developing this program was assigned to the Reserve Instruction Branch established in 1947. Two very successful programs emerged: the National Resources Conferences initiated in 1948 and the Correspondence Course launched two years later. Both programs grew rapidly and

## History of the Industrial College of the Armed Forces

### Chapter IV

developed a large following for the Industrial College throughout the nation.

The organizational charts of the Industrial College assigned a prominent role to the external programs. For example, the organizational chart for 1955 has one of the two Deputy Commandants responsible for the Extension Courses Division composed of the Correspondence Study Branch and the Civilian Reserve Branch. Two years later (1957) the two branches were redesignated as the Correspondence Branch and the Conference Branch. More significant changes appeared in the ICAF organizational chart for 1960. The two former branches were redesignated as the National Security Seminar Division and the Correspondence Course Division - both components of the School of Extension Studies. As before, the extension programs were headed by a Deputy Commandant who now was assisted by the Senior Educational Advisor. The organizational chart gives the impression that the Industrial College had as its chief components, two co-equal schools - the School of Resident Studies and the School of Extension Studies. The main component of the Industrial College beyond doubt, was the Resident College. The two extension programs can be regarded as its scious, or offshoots. For example, until the establishing of the Textbook Development Group in 1960 (under the supervision of the Senior Educational Advisors) the textbooks for the Correspondence Course were developed by the faculty of the Resident School.

The first seminar of the new program was conducted in New Orleans in January 1948. In this first year of the program seminars were held in cities in six states. Initially entitled as "National Resources Conferences" the seminars were sponsored and conducted by local organizations, usually by the Chamber of Commerce in conjunction with the respective U.S. Army, Naval District and U.S. Air Force District. As the program grew, two-week seminars were usually conducted in 14 to 16 cities annually by two teams each composed of six officers (two from each Military Service).

The Joint Chiefs of Staff initially regarded the seminar as a kind of military workshop on mobilization concepts. From the start, the National Resources Conferences attracted widespread public interest marked by a rapid growth in attendance. The annual reports of the Industrial College to the Joint Chiefs of Staff present attendance figures that attest to the growing popularity of the seminars.



## History of the Industrial College of the Armed Forces

### Chapter IV

The Conferences attempted to develop a better understanding of the many and interrelated problems associated with national security. One of its aims was to provide an appreciation "of the inseparable nature the civilian-military team." By way of example, each conference in fiscal year 1956 consisted of 32 illustrated one-hour lectures, 4 formal panels, selected films and a visit to a local industrial establishment.

Reserve officers attending the two-week conferences ranged from Army Lieutenants and their equivalents in the other Services to general and flag officers. The average rank was that of Major and Lieutenant Colonel. For the Reservists, the Seminars provided more than a means of meeting some of their annual training requirements. It enabled them to keep informed on important developments in national security. The growing number of civilians who attended the conferences came because they were interested in the program.

Although attendance figures attest to the growing appeal of the conferences it is not easy to assess the value of the program. In his report to the Joint Chiefs of Staff for Fiscal Year 1954 the Commandant, Rear Admiral W. McL. Hague observed that by-products of the Resources Conferences were an increased appreciation by civic and industrial leaders of the problems faced by the Military Services; more regard for the Military Establishment; and the promotion of informal association of officers from all of the military Services.

At the end of the program's first decade (as of 30 June 1958) a total of 42,873 persons had attended the National Resources Conferences. This number included 27,774 military personnel and 15,099 civilians. The title of the program was changed to "National Defense Resources Conferences" in June 1958. The same year the conference lectures were used as the basis of a television series consisting of 15 thirty-minute films approved by the Department of Defense. The programs were recorded at Station WQED, Pittsburgh, under sponsorship of the Ford Foundation and was carried by 30 stations of the Educational Television Network in the fall of 1958.

The seminars generally were held in medium-sized cities and were conducted by the Blue and the Grey teams. Usually sponsored by a local chamber of commerce under the direction of ICAF and local military area commanders each seminar usually attracted a great deal of attention. The keynote speaker frequently was a prominent personality - a U.S. Senator, a Governor, a civil leader, or a military general or flag officer. Team members often received individual

## History of the Industrial College of the Armed Forces

### Chapter IV

invitations to appear before civic groups, or to participate in radio and television programs.

The program was designed to provide military personnel with current national security information, but it also attracted a growing number of civilians. In fiscal year 1961, the total enrollment of 4,643 in the 14 sponsoring cities was almost equally composed of military and civilian enrollees. The following year total attendance rose to 9,473, and for the first time, civilians outnumbered military enrollees (2,713 military and 3,152 civilians). Cumulative figures for the program since its inception in 1948 to June 1962 show a total attendance of 62,871 persons: military personnel, 38,516 and civilians, 24,355. The Seminar Program not only made the Industrial College of the Armed Forces well-known nationally, it familiarized many Americans with the nation's national security problems and with national defense actions to meet those problems.

The Industrial College also made available to military Reservists a Correspondence Course based on subjects studied in the Resident Course. Started in 1950 as "The Emergency Management of the National Economy," the course was based on a series of textbooks ranging from 22 to 26 in number, that came to be known as "The Blue Books". Designed for completion in about 15 months, the course was well-received by military Reservists who were granted retirement points for their work. Other participants included active duty military personnel as well as civic and business leaders.

As an off-campus replica of the resident course, the Correspondence Course followed much the same path as the evolving curriculum of the Resident program. Changes in emphasis in that program were also reflected in the periodic revisions of the textbooks. The name of the program also underwent changes: to "The Economics of National Security" in May, 1958, and to "National Security Management" late in 1965.

From the very beginning, primary reliance was placed on "in-house" preparation of the textbooks. Essential support was provided by the Resident Course faculty. Some help was also obtained from educators in area universities and other specialists. In order to keep instructional materials reasonably current, every effort was made to revise and update a third of the textbooks every year.

Enrollments in the Correspondence Course mounted steadily. In 1959, for example, there were 3,472 active enrollees, (1,568 Reservists, 614 active duty military personnel, 1,258 civilians and 22 foreign nationals). The same year a plan to offer the correspondence course as a

## History of the Industrial College of the Armed Forces

### Chapter IV

basis for group study by Reserve officers during drill periods was approved by the Military Services. This "Group Study Program" soon drew a growing proportion of the Correspondence Course enrollment. Another development in 1959 was the approval granted by the JCS to make the Correspondence Course available to selected foreign nationals. Such students were enrolled through the assistance of the Army Military Attache network.

The Resident Course faculty was responsible for developing textbooks for the Correspondence Course until 1960. A Correspondence Textbook Committee coordinated the periodic review and revision of the textbooks. Professional leadership and coordination was provided by Committee Chairman Dr. Benjamin H. Williams until his retirement in 1959. After his departure, progress in building the program slowed and many of the textbooks were below desired standards. The problems encountered demonstrated the need for a small, but highly qualified group to serve as a focal point for leadership, guidance, and direction of the program.

The Commandant met this problem on 31 May 1960 by assigning to the Senior Educational Advisor (SEA) responsibility for the preparation of the Correspondence Course textbooks and by establishing a Textbook Development Group. The new group, which reported to the Senior Educational Advisor, became operational early in 1961. Under the new arrangement, the Textbook Development Group was responsible for all aspects of textbook planning, preparation, and revision, and for developing monographs to support the textbooks. As before, members of the Resident faculty were expected to participate in these tasks.

In order to speed up the revitalization of the Correspondence Course an initial "crash program" calling for the preparation of eight textbooks was launched in January 1961. The concentrated efforts on textbook preparation and improvement built a solid basis for the Correspondence Course. By 1965 most of the goals for the preparation of the textbooks for the Economics of National Security course had been met. The long-range results have been impressive. The "Blue Books" became widely known and acquired a strong reputation especially in ICAF's "other campus" - its instructional activities away from Fort McNair. In addition to the ICAF Correspondence Course, the Blue Books were frequently requested by Defense and other Federal agencies and individuals.

The question soon arose whether the Industrial College could keep the Correspondence Course textbooks reasonably current (usually interpreted as updated every three years).

## History of the Industrial College of the Armed Forces

### Chapter IV

The Textbook Development Group had only three professional members, and the assistance that might be provided by ICAF faculty members and students was uncertain. In July 1962 the Commandant suggested that at least a large portion of the work of keeping the textbooks up-to-date be contracted out. In response to this suggestion, the Senior Educational Advisor, Dr. Marlin Reichley marshalled a number of persuasive arguments for the in-house development of the textbooks.

Dr. Reichley's recommendations were followed and faculty members and students were encouraged to participate in the textbook development program. In response, faculty members and students made substantial contributions to the program. For example, the preparation of the Procurement textbook by Captain (later Rear Admiral) Stuart J. Evans, class of 1968 and its later revision by Colonel David L. Belden, USAF, and Ernest G. Commack, class of 1973 produced a systematic and comprehensive survey of a complex subject area. The problem of obsolescence however, was never completely solved. The preparation or revision of a textbook was a formidable task that required more time than students generally had available. By necessity the Blue Books had to be prepared in a manner that would give them as long a useful life as possible. Sometimes this was done by including a supplement in a textbook when additional copies had to be printed. From time to time, also, current publications were sent to Group Study Programs and to individual Correspondence Course students.

From its inception in 1950 to 30 June 1962 the Correspondence Course had a cumulative total enrollment of 34,370. For the same period, however, disenrollments totalled 15,454 and graduates numbered only 12,441. These figures illustrate the persistent problem of the high number of noncompletions. The record for FY 1962 showed no improvement. During that year enrollments totalled 6,475 and there were 2,249 graduates. The Navy furnished the highest number of military enrollments with 1,025 students, but 1,474 Federal employees and 1,415 other civilians led the active enrollments statistics for FY 1962. During this same year, 36 foreign nations provided a total of 714 students - an impressive beginning for this extension of the program.

10 Memorandum, Senior Educational Advisor (Reichley) for the Commandant, 1 August 1962, sub: "ICAF Textbook Development".

# History of the Industrial College of the Armed Forces

## Chapter IV

### I. The Board of Advisors

The Board of Advisors was very active during the years that Lieutenant General George W. Mundy, USA served as Commandant (1957-1961). In 1959 the Board took special notice of the problem of obtaining superior personnel for both the faculty and the student body. The Board concluded that assignment to the College should be made as attractive as possible. The selection of students should be restricted to officers who show great promise and who appreciate the importance of the education offered by the College.

In furtherance of this suggestion, the Industrial College acted to assist the Military Services in assigning the most qualified officers to the ICAF faculty. The Research Branch of the Resident Division in collaboration with the personnel officers of the Military Services examined the availability of officers with an educational background in selected subjects at the graduate level or who had other desirable qualifications. This study was designed to provide the Military Services with specific criteria for the selection of officers to serve on the ICAF faculty.

The wide-ranging scope of the Board's interest is illustrated by the agenda of its 1958 meeting. Topics considered included:

1. The relationship of ICAF to the Office of Defense Mobilization (ODM).
2. The College's research programs.
3. The preparation of Correspondence Course textbooks.
4. Faculty improvement.
5. Seminar discussion periods.
6. Selection of students.
7. Overseas trips.

On the first topic, the Board believed that ICAF should have the same relationship to the Office of Defense Mobilization as the National War College had to the Department of State. In one of its two resolutions, the Board recommended that a study be made of the relationship of the college to Office of Defense Mobilization. A committee subsequently appointed by ICAF and ODM to study this issue resulted in an agreement for the Office of Defense mobilization to name a representative to serve as liaison to the Industrial College and as advisor to the Commandant. This was done in 1959.

## **History of the Industrial College of the Armed Forces**

### **Chapter IV**

Also in 1959 General Mundy concluded that a similar arrangement should be made with the Department of State to appoint a Foreign Service Officer to act as advisor to the Commandant of the Industrial College. The second resolution passed by the Board in 1959 recommended approval of the proposed student overseas trips.

A link with the other joint colleges grew out of the establishment of the Joint Military Educational Committee (JMEC) consisting of the Commandants of the three joint colleges. As President of the Board of Advisors, the Commandant of the Industrial College could bring to the attention of the Board the issues raised in the Joint Military Education Committee.

At its 1959 meetings, the Board of Advisors emphasized that the Industrial College should be governed by two basic ideas: (1) emphasis should be maintained on the economic aspects of national security; (2) more attention should be given to the international aspects of economic and political factors related to coalition warfare.

The Board was informed that the Industrial College had eliminated all military field trips within the United States. Such trips had previously been made to Army installations, Navy task forces, and various other military activities. The only field trips retained outside of the international trips were the one-week visits to U.S. industrial areas and the annual visit of the United Nations.

In 1959, a representative of the Joint Chiefs of Staff attended the annual meeting of the Board. This became a standard practice. On this occasion, General Mundy informed the Board that the Joint Military Education Committee in its June 1958 report to the Joint Chiefs of Staff had emphasized that the quality of the students at the Senior Joint Colleges was important, not their numbers. The Committee recommended to the Joint Chiefs that they request the military Services to provide students of a high caliber to the Senior Joint Colleges - a recommendation that was approved by the Joint Chiefs.

Dr. Reichley informed the Board that ICAF was no longer required to submit its curriculum in advance to the Joint Chiefs for approval. Instead, a full description of the curriculum was included in the College catalogue which was sent to the Joint Chiefs. The annual reports submitted to the Joint Chiefs also described changes in the curriculum as they occurred.

## History of the Industrial College of the Armed Forces

### Chapter IV

The Board favored the idea of offering highly-qualified professional educators a year's contract at the Industrial College. Presumably such educators could obtain a year's sabbatical from their institution. Although attracted to this idea, the Board agreed that it was impractical because of personnel spaces limitations and also because a visiting professor's expertise would apply to only about a months' span of ICAF's wide-ranging curriculum. Instead, the Board agreed in its 1959 meeting that it was more practical to call in experts as needed to deliver lectures or to conduct seminars.

The quality of the faculty was a continuing concern of the Board of Advisors. In 1960, the Board emphasized that the maintaining of high academic standards depended on strengthening the permanent civilian faculty. According to the Board "the small nucleus of professional educators provides continuity in the educational policies and curriculum," and was the primary instrument for developing long-range plans. The Board was of the opinion that civilian salaries and grades were too low at the Industrial College - all the more so because of the rising levels of academic salaries throughout the country. Contributing to this situation was the rapid rise of college and university enrollments. The Board suggested that the Joint Chiefs set up an ad hoc committee to study the requirements of the joint colleges for a civil service supergrade structure that would attract and hold highly-qualified professional educators.

With regard to military faculty members, the Board noted that in 1959 - 1960 the Military Departments recognized that assignments to the faculty of the Industrial College fulfilled the requirement for joint staff duty prior to promotion to flag or general officer rank. General Mundy supported the Board's view on this subject. The Board recommended in 1961 that the same consideration be given to officers who graduated from the Industrial College.

In view of later events it is interesting to note that in 1959 - 1960 the Joint Military Education Committee restudied the missions of the three joint Colleges. It examined whether the three Colleges could be merged or combined in a university-type organization. The Committee concluded by reaffirming its support of the separate status of the joint Colleges. The ICAF Board of Advisors agreed with this recommendation of the Committee.

The Board of Advisors in 1960 was deeply concerned over the prospective reduction in rank of the Commandant position from three stars to two stars. The Board warned that such a step would have a severe impact on the prestige of the

## History of the Industrial College of the Armed Forces

### Chapter IV

Industrial College. The next year the Board again strongly recommended the retention of the three-star rank as essential to the prestige and effectiveness of the College.

The annual meeting of the Board of Advisors in February 1962 was attended by the Deputy Assistant Secretary of Defense (Education and Manpower Resources) along with the JCS representative, as ex officio members. At this meeting the Board urged that the College receive more students from Federal departments and agencies other than the Department of Defense. This was not a new recommendation, but in 1962 it was given more emphasis. The Board pointed out that government agencies were becoming increasingly concerned with national security problems and issues.

The Board again expressed its concern for the civilian members of the faculty. It expressed "keen disappointment," over the level of civilian faculty salaries which it regarded as well below those in leading colleges and universities. The Board noted that despite some recent improvements, this was still a serious problem. The Joint Military Education Committee in January 1961 had also recommended improving the salaries of the civilian faculty members at the Industrial College but also without results. Meanwhile, the College was unable to fill a senior Professor of Management Engineering (GS-15) position. The Department of the Army, however, did grant one super grade to the Industrial College for the position of Senior Educational Advisor which was raised to GS-16 on 3 June 1962.

#### J. The Athletic Program

A memorable development in the history of the Industrial College was the establishment of a program of athletic competition with the National War College by formal agreement on 2 February 1960. This event was preceded by competition in a growing number of sports, starting with softball in 1947 - 1948. In the late 1950s the annual fall softball series was given a goal - the winning of the new General Dwight D. Eisenhower Trophy. By 1960, perpetual trophies for annual ICAF competition had also been established for golf, bowling, and tennis. The trophies were:

Golf - The General Omar N. Bradley Trophy

Bowling - The Arthur W. Radford Trophy

Tennis - The General Nathan F. Twining Trophy

The Interschool Athletic Agreement of 2 February 1960 between the two Colleges recognized these trophies and



## History of the Industrial College of the Armed Forces

### Chapter IV

prescribed the rules as to how they were to be won. Softball was to be played in the fall with ten-man teams. The tenth man was a "Shortfielder." The Eisenhower Trophy went to the first team to win four games. Bowling competition was conducted in winter with teams consisting of five players. The first team to win four matches based on total pins (with no handicaps) was awarded the Admiral Arthur W. Radford Trophy. The tennis competition was conducted in the spring and consisted of nine matches - six of singles and three of doubles. Each match required the winning of two sets. The golf matches also were held in spring and were conducted at a mutually acceptable local course - usually the Army-Navy Country Club. The number of players per team also was decided by mutual agreement - usually from 20 to 40 persons. The winner was determined by 18 holes of match play.

This athletic competition formalized in 1960 attracted a great deal of interest. Many of the exploits of this competition were among the most highly prized recollections of the year spent at Fort McNair by students of both colleges.

## History of the Industrial College of the Armed Forces

### Chapter V

#### V. THE INDUSTRIAL COLLEGE IN TRANSITION, 1962 - 1967

##### A. A Change of Direction

The 1962 Charter revision which designated the Industrial College as "the capstone of our military educational system in the management of logistic resources for national security" did not come as a surprise. The Department of Defense had become increasingly concerned over improving the management of the resources for which it was responsible. The National Defense Establishment had become so large and the conducting of its affairs had become so complex that military executives were faced with difficult management responsibilities. In this situation, the Department of Defense looked to its senior educational institutions and especially to the Industrial College for preparing military officers for important positions in the management of defense resources. The Department surveyed the management education programs conducted in the both in the military schools and how these programs differed from each other. The question naturally arose as to how the Industrial College in its newly defined "capstone of management education" role related to other military and civilian schools. In order to obtain a better perspective on this question, before implementing the new ICAF charter, the Commandant, Vice Admiral Rufus E. Rose toured various West Coast management education centers in the summer of 1962. Members of the ICAF faculty and staff made similar visits to observe the methods and subject matter used in management education. Liaison was established with companies engaged in automated data processing systems.

The 1962 charter revision gave ICAF a renewed sense of purpose. In the preceding period which had led to the reopening of the Army Industrial College and the reconstituting of the College as a joint institution was reinforced by the defense build-up associated with the Cold War. As the years went by, however, the focus on mobilization became less intense as the curriculum underwent a broadening process. With the advent of nuclear weapons, doubts also began to appear as to the nature of the next major war. The need for preparing officers for economic mobilization planning responsibilities continued to be the basic college mission but there was a growing interest in education in the management of defense resources.

<sup>1</sup> In addition to the annual reports to the JCS, sources for this period include the very informative studies by Dr. Stanley L. Falk, The Industrial College in Transition 1964-1965 and the "New Industrial College, 1965-1967, 1967, 1968", both in the NDU Library.

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

An immediate concern was to develop faculty resources in the area of management education. This was done in part by stepping up the regular program of faculty visits to other academic institutions, research organizations and professional meetings. In addition, the Industrial College established a senior professorship of management engineering and an associate professorship in industrial management in the Resident School. Also, a special textbook "Management Concepts and Practice" was prepared by the Textbook Development Group for use in the Foundations unit as well as in the Correspondence Course.

The Joint Chiefs of Staff recognized that final implementation of the new ICAF charter might require two years or more but the college was directed to undertake an immediate review of its curriculum and submit a tentative new plan by the spring of 1962. This task was completed in early April 1962.

The revised curriculum reflected the determination of the Industrial College that it would not duplicate the type of advanced instruction in management offered in specialized management schools within and outside of the Department of Defense. The dominant theme in the curriculum was the emphasis given to the management of resources. This theme was developed within the context of the subject areas covered in each major course unit. Similar treatment was given to the study of insurgency and counter insurgency.

Throughout the 1962 - 63 academic year increased emphasis was given to various aspects of management. Students participated in discussion groups or attended lectures in specific areas of management. The entire student body engaged in an IBM computer assisted business management decision making game simulating the conditions and pressures of competition.

In this first year under the new charter the question arose: how much emphasis should be given to management principles and techniques in the ICAF program? The faculty was divided on this question. Some members felt that the Resident Course should be entirely restructured to devote major attention to management subjects and to make management the dominant theme throughout the course. Most faculty members, however, believed that the ICAF mission called for a broad orientation in national security affairs with emphasis on economic, logistical, scientific and technological factors. Management was an important theme but it was not intended to be the dominant theme. Although it did not receive as much attention as in earlier periods the College still was expected to provide instruction in economic mobilization.

## History of the Industrial College of the Armed Forces Chapter V

Differences of opinion also arose over the attention that should be given to management methods and techniques. How much time should be devoted to the study of such techniques for their own sake as opposed to the broader study of management as a tool in the administration of logistic resources? There was general agreement that students should become familiar with modern management techniques and computer-based systems and that they should have at least some understanding of computer technology, operations research methods, programming, and other management tools.

By the end of the 1962 - 1963 school year, four broad principles were accepted by the Commandant and his senior advisors "as firm policy guideline for future curriculum development". As stated in the commandant's annual report to the Joint Chiefs of Staff, these principles were:

"First, management is treated, not as a separate subject, but as a unifying theme in the context of the economic, industrial, scientific and technological aspects of national security. The Industrial College is, in short, not a management school per se, but rather a school for the study of national security resource management. Second, attention is focused on the problems of management at the upper levels of national security administration and defense programs, rather than those of the private businessman in the economic marketplace. Third and fourth, our approach to management, as to other aspects of our program, is pitched at the educational level of a graduate school for senior military and government executives, and is designed to avoid, as far as possible, duplicating the courses in management offered in other military schools or in civilian institutions."

A second area of emphasis was introduced into the mission of the Industrial College by the Joint Chiefs of Staff shortly after their approval of the revised charter. The college was directed to give proper attention "to the study of policies, programs and techniques for combating communist - inspired "wars of liberation" and insurgent movements, emphasizing the economic aspects of the subject."<sup>2</sup> With JCS approval this subject was woven into the Resident Course rather than presenting it separately as a unit or subunit. In this way, the various aspects of counter-insurgency could be studied within a broader context, such

<sup>2</sup> Industrial College of the Armed Forces, Report to the Joint Chiefs of Staff on Operations During Fiscal Year 1962, pp. 2 and 3. Ibid, FY 1963, pp. 1 and 3.

## History of the Industrial College of the Armed Forces

### Chapter V

as economic aid programs, the defense budget, and national security organization.

The Resident Course during the 1963 - 64 school year reflected this increased emphasis on the management of resources. Attention was also given to the management of national security programs and systems. The opening or "Foundations" unit of the course dealt with basic principles of management, thus providing a basis for more advanced instruction in subsequent units. In at least half of the units comprising the course, management was an important theme. A number of lectures were concerned with aspects of defense management and also with management techniques in government and industry. Students again participated in the IBM Management Decision Making Exercise. The 1963 - 1964 program also continued the study of counter-insurgency with emphasis on economic and social aspects of the subject. The study of counter-insurgency was a part of the General Studies program which ran throughout the year concurrently with the eight units of the Resident Course.

By the end of the 1963 - 1964 school year the changes required by the 1962 charter revision were virtually completed. Although the curriculum was still undergoing minor revisions and adjustments, no important changes were anticipated in course concept, structure, or methodology.

Educational methodologies during the 1962 - 1964 academic years continued to reflect traditional patterns. As before, the main reliance was on lectures, seminars, small-group discussions and student committees. The discussion sessions were moderated by faculty members or students and often featured visiting specialists.

During the 1962 - 1963 term students were required to prepare a substantial research paper - a thesis. A faculty monitor was assigned to guide and assist each student in performing this task. This was a year-long project, covering the period from September to the end of March. A faculty review board selected 32 of the 178 theses for publication and distribution to government agencies. A student-prepared abstract was required for each thesis that was selected for reproduction or for retention in the ICAF Library. The collected abstracts were reproduced and distributed to interested government agencies. Students were also required to give short (12 to 15 minute) oral reports to the assembled faculty and students. The Resident Course, as before, included both domestic and overseas field trips.

## History of the Industrial College of the Armed Forces

### Chapter V

#### B. Reorganization of the College, 1964.

The actions taken in the first two years under the Charter of 1962 were merely a prelude for more changes to come. The College's organization, curriculum, and methodologies were all carefully scrutinized as a basis for actions designed to promote maximum effectiveness. These developments reflected a new climate of self-analysis in the Department of Defense in which existing procedures and organizational structures were studied in order to find ways to promote efficiency. Emphasis was on improving the management of defense resources. Against this background, the Industrial College instituted a series of changes in the period 1964-1966. The result was what the Commandant described as "the new Industrial College."<sup>3</sup>

Some changes in the organization of the Industrial College were perhaps overdue by the time Lieutenant General August Schomburg, USA became Commandant on 1 April 1964. Few really basic organizational changes had been made in the years since the College was reconstituted as a joint institution in 1948. As a former graduate of the college (1953) General Schomburg was well-acquainted with the Industrial College. He believed that the organization of the Industrial College did not provide "a clear division and allocation of responsibility, "...planning was not sufficiently separated from execution. General Schomburg also regarded the organization as excessively complicated. It appeared to isolate the Commandant from the academic operations of the College, much more so than he himself would desire. General Schomburg wanted to become more directly involved in academic matters.

The changes desired by General Schomburg were perhaps accelerated by a Joint Chiefs of Staff manpower survey of the College that was underway when he became Commandant. The report of the survey teams, approved by the Joint Chiefs of Staff on 18 June 1964, included the recommendation that the Industrial College should lose one of its two two-star billets. In anticipation of this change, and in order to implement certain of his own concepts, the Commandant directed the formation of an ad hoc committee to study the organization of the College. The committee was chaired by the Executive Officer and included the Vice Deputy Commandant of each School.

<sup>3</sup> The discussion of organizational and curriculum changes, 1964-1966 is based on the comprehensive treatment of these subjects by Dr. Stanley L. Falk in "The Industrial College in Transition, 1964-1965". Dr. Falk prepared this study while serving as a member of the ICAF faculty.

## History of the Industrial College of the Armed Forces

### Chapter V

The Committee was especially concerned with determining the structure that would best separate planning from execution. Another major problem was the question of whether the positions of Senior Educational Advisor to the Commandant and Director of Instruction for the School of Resident Studies overlapped, were duplicative, or conflicted with each other, and did their occupancy by the same person (thus blending planning and operations) violate sound management practices?

The committee's report, submitted to the Commandant on July 1, 1964, included the following recommendations: (1) abolition of the two schools, with the two subordinate departments of each reporting directly to the single Deputy Commandant who would remain after the anticipated loss of a two-star billet; (2) elimination of the position of Senior Educational Advisor and assignment of the Textbook Development group to the Correspondence Division; (3) the Director of Instruction to become Director of Academic Plans, exercising staff supervision over academic matters and acting as academic advisor to the Commandant and Deputy Commandant; and (4) a Faculty Board, chaired by the Deputy Commandant, composed of principal staff, and faculty members, and including, the Curriculum Committee.

A criticism of these recommendations was that they went far beyond what was needed to adjust to the loss of a two-star billet. Serious reservations were also voiced over the proposed solution of the Director of Instruction/Senior Educational Advisor problem. Critics were concerned that changing the functions, position, and authority, of the Director of Instruction would have an adverse effect on the Resident Course. The proposed position of Director of Academic Plans would not entail the broad staff supervision of academic matters exercised by the Senior Educational Advisor by virtue of his dual position as Director of Instruction/Senior Educational Advisor. In fact, some faculty members feared that moving the Director of Instruction from the School of Resident Studies would seriously impair the operations of the Resident School.

In order to allay the misgivings of members of the Resident faculty, the Deputy Commandant, Major General William S. Steele, USAF, suggested to General Schomburg that Dr. Marlin S. Reichley, Senior Educational Advisor and Director of Instruction, be assigned to the position of Director of the Resident School. Although the school had been operating under the supervision of Major General Stoughton, Dr. Reichley was familiar with its operations and had been General Stoughton's principal assistant. With the inclusion of this suggestion General Schomburg approved the recommendations of the ad hoc committee.

## History of the Industrial College of the Armed Forces

### Chapter V

Under the revised organization which went into effect on 15 July 1964 the Industrial College was headed by a Commandant, Deputy Commandant, and an Assistant Deputy Commandant who acted in effect, as dean of students. The College had three schools: Resident School, Correspondence School, and National Security Seminar School. Administrative functions, including those of the new Protocol Branch, were centralized in the Office of the Secretary. The position of Director of Academic Plans was not established. Instead the functions intended for that position were assigned to the Assistant to the Deputy Commandant/Chairman of the Curriculum Committee. The Curriculum Committee reported to the Faculty Board. The Deputy Commandant, as the senior member served as the chairman of the Faculty Board (although in its early meetings it was chaired by the Commandant).

The most important changes brought about by the reorganization were: the restructuring of the Industrial College into an institution with three co-equal schools; the separation of curriculum planning from implementation; and the centralizing of College-wide responsibility for planning in a high-level staff element. Another result was the shifting of much of the administrative work of the Schools to the Office of the Secretary.

Soon after the organizational changes made in the summer of 1964 dissatisfaction arose over certain features of the new structure. The main concern was over the role of the Assistant to the Deputy Commandant/Chairman of the Curriculum Committee. As the Curriculum Committee pursued its task in 1964-1965, it became evident that its chairman was more than a staff assistant to the Deputy Commandant. He also provided staff advice and assistance to nearly all elements of the College. In addition, in order to promote the implementation of the guidance developed by the Curriculum Committee, he was providing staff supervision over the operating elements of the College. Another concern was that there was little reason for<sup>4</sup> the two-department structure of the Resident School.

In the discussion of these problems agreement was reached that there should be a return to the original concept of a Director of Academic Plans as a principal staff element of the College. Meanwhile, proposals on the organization of the Resident School generally agreed that the two departments should be eliminated. Accordingly, the new organization, effective 1 July 1965 established the Office of the Director of Academic Plans and Research and

<sup>4</sup> Falk, The Industrial College in Transition, 1964-1965, pp. 63-66.



## History of the Industrial College of the Armed Forces

### Chapter V

the Office of the Secretary as the two principal staff elements of the College, both reporting to the ICAF command element. The latter now included only the Commandant and the Deputy Commandant; the position of Assistant Deputy Commandant was eliminated.

The Office of the Director of Academic Plans and Research now would carry out the extensive functions that had been performed by the Office of the Assistant Deputy Commandant/Chairman, Curriculum Committee. Three military and three professional civilian positions were assigned to the new office. As for the Faculty Board, it included the Commandant and Deputy Commandant as regular members, as well as the Director, Academic Plans and Research, the Directors of the three Schools and the ICAF Secretary. The Curriculum Committee, chaired by the Director of Academic Plans and Research, remained as a subordinate element of the Board. As for the Resident School, it was headed by a Director and a Deputy Director, with the latter assuming the duties of the former Assistant Deputy Commandant as Dean of Students. The two departments in the Resident School were eliminated.

The Industrial College presented a leaner, more streamlined organizational structure as a result of the changes made in 1964 and 1965. This new organization was put to the test starting with the 1965-1966 academic program.

Under the new organization the Director of Academic Plans and Research as the head of the central academic planning staff of the College, exercised staff coordination, review and supervision over the three Schools and was directly responsible for program planning and research. He also headed the Curriculum Committee of the Faculty Board. This committee had played the central role in developing the new ICAF program and methodologies in 1964 and 1965. Impressed by the effectiveness with which the Curriculum Committee had performed its difficult task, General Schomburg assigned similar functions to the Office of Academic Plans and Research and expanded its authority. As for the Curriculum Committee, it continued to exist in the 1965-1966 academic year, but it did not operate, and it soon disappeared. Since the Office of Academic Plans and Research now had a heavy workload, more staff members were assigned to it, thereby reducing personnel strength elsewhere especially in the Resident Facility.

The Commandant's advisory staff also underwent some changes. Dr. Marlin S. Reichley, the Director of the Resident School in 1964-65 was on sabbatical leave after the conclusion of that academic year. Upon his return in the summer of 1966 he assumed the new position of Special

## History of the Industrial College of the Armed Forces

### Chapter V

Assistant/Educational Advisor. Also in the summer of 1966, Major General William S. Steele, USAF, retired and was replaced as Deputy Commandant by Rear Admiral Jack J. Appelby, USN.

#### C. Curriculum Review and Revision, 1964-1967.

##### 1. An In-Depth Review

Once the initial decisions on organization were completed, attention focused on examining and revising the curriculum. General Schomburg felt that not enough changes had been made to conform to the requirements of the 1962 charter revision. He also believed that the views of key officials throughout the Department of Defense should be taken into account in developing the ICAF curriculum. The Commandant and Deputy Commandant, consequently, held conversations with a number of key officials in the Office of the Secretary of Defense in the spring and summer of 1964. In these discussions, several points were made again and again:

a. The Industrial College could give top leadership in the teaching of management within the Military Services and in developing an integrated management educational system.

b. The ICAF curriculum should give more attention to management so that graduates would be ready for important Department of Defense Management positions.

c. The course should be more challenging with the students required to do much more work. Students should study and do research in current Department of Defense problem areas and spend much less time attending lectures.

Some observers found fault with all Senior Service Colleges. General Greene, Commandant of the Marine Corps, for example, sharply criticized the methodology and curriculum of all of the Senior Services Colleges. He emphasized that there were far too many lectures and there was not enough hard work and education. He suggested that students should be required to pass entrance examinations to be eligible for admission to a college and that they be given written examinations during the school year. Further, students should be graded on a sine curve with some of those in the lower sector being dropped before graduation. He contended that the curricula at the Senior Service Colleges were far too broad. His recommendations attracted little support!

## History of the Industrial College of the Armed Forces

### Chapter V

The views obtained from these discussions made a strong impression on the Commandant and Deputy Commandant who felt that they should be given serious consideration in developing the curriculum. General Schomburg passed on these views to the Director of Instruction Dr. Marlin S. Reichley and asked him to analyze the second half of the 1964-1965 resident curriculum "with a view of meeting these views." General Schomburg was also concerned over possible duplication with other Service schools and the National War College.

Dr. Reichley's review of the Curriculum submitted to the Commandant in June 1964 described how the College had interpreted the revised mission assigned to it by the Joint Chiefs of Staff in 1962. With regard to the management theme, the College had decided that:

a. Management of resources should be treated as a major theme or approach, rather than as a block of subjects in the broader framework of the study of the economic and industrial aspects of national security;

b. The treatment of this theme should be pitched at a level appropriate to the character of the course and the basic aim of equipping the students for diverse assignments of high responsibility in the national security structure.

c. As the "capstone" of the military education system in the management of logistic resources for national security the College had the mission of supplementing and refining and not that of duplicating the various programs and courses in management provided at other military schools and civilian universities.

Dr. Reichley's review again emphasized that the Industrial College was not to be a "management school" per se. Rather, it was concerned "with management in a particular context; that of national security affairs studied...in their economic and industrial aspects." The College did not "train managers" but instead, sought "to inculcate a 'managerial' outlook." This approach had been "endorsed by the senior logistics planners in the Joint Staff and 'the Four Services' and had 'governed the development of the ICAF curriculum for the past two years.'" As for the 1964-1965, program, the Director of Instruction was convinced that the development of the management theme was "wholly responsive to the letter and spirit of our mission."

An intensive review of the curriculum was launched within the School of Resident Studies when the new college organization went into effect in August 1964. The new

## History of the Industrial College of the Armed Forces

### Chapter V

Assistant to the Deputy Commandant/Chairman Curriculum Committee Colonel John B. Morgan, USA directed this effort. He was assisted by the other two members of the Curriculum Committee, Dr. Richard Leighton and Colonel Charles F. Austin, USA. The purpose of this review, as directed by the Commandant, was to refocus the latter portions of the 1964-1965 curriculum to give more attention to the management theme. The course was to reach a fitting climax in Unit VIII with the study of specific DOD-oriented management problems. There were to be fewer lectures by outside speakers and there should be more direct faculty participation in the instructional program.

The work of the Curriculum Committee and the Faculty Board in developing the 1964-1965 curriculum was reflected in the revised curriculum and General Information Book issued in August, 1965 to the incoming students. One change was the concentration of all counter - insurgency material into a single element instead of spreading it out throughout the course. The major effect of the revision was the development of a logical progression from subject to subject until the culmination of the course in Unit VIII.

#### 2. Planning the 1965-1966 Curriculum

Curriculum planning for the 1965-1966 school year was far-reaching and intense. It was based on the premise that any entirely new approach would be made, with little regard for past concepts and methods. The process began with efforts to define and interpret the ICAF mission. Its goal was to provide the Schools with more specific and detailed guidance than before.

The Curriculum Committee developed the new curriculum plan in three stages: course content; course emphasis; and methodologies. In the first stage, the projected major subjects to be studied in the course were referred to as "building blocks," - the foundations on which the course would be structured. There were four primary "blocks" of study, progressing from broad considerations to a focus on the primary theme of the course. The first block, "Foundations" consisted of environmental subjects and basic disciplines as background needed for understanding subsequent parts of the course. The second block focused on basic "elements of national strength," both domestic and foreign, and was oriented toward U.S. national security problems. The third block was concerned with national security management at the national level. The final block considered national security management at the Department of Defense level and was the logical culmination of the three preceding blocks.

## History of the Industrial College of the Armed Forces

### Chapter V

The curriculum plan offered the four "building blocks" or "courses" as the framework of the curriculum. The basic divisions of the resident program were to be the four courses, lettered A through D, rather than "units" as in previous years. Subdivisions of each course would be numbered units (using arabic numerals).

A number of questions had to be resolved by the Curriculum Committee in planning the contents of the four courses. In the first course, for example, the Committee decided that economics and management should be in separate units, but how much mathematics should be included in the management unit? Since the introduction of mathematics into the course was a departure from the past, it attracted a lot of attention. After lengthy discussions the Committee concluded that instruction in mathematics should be focused on the need of potential DOD managers and should be included in the Management unit of Course A.

The Curriculum Committee agreed that Course B should be a U.S.- oriented study of the management of national security. Its focus was on the resource elements of national power, that is, human resources, natural resources, and developed material resources. Foreign resources and their management were to be examined almost exclusively in their relationship to American security interests. A number of questions arose concerning Course C. How much international material should be included in the course? Should the study of national security management be restricted to economic policies, or should it deal with all national security policies and issues of concern to a Defense manager?

The question of the extent and scope of international coverage to be included in Course C raised concern over entering an area that was more appropriate for the National War College. The committee felt that some attention had to be given to international factors affecting U.S. policies and programs, but it agreed that the review of these factors provided in Course A might be sufficient.

Since Course D was regarded as the most important course of the year, it was given a great deal of attention. The course would consist of two units: the first would focus on planning and policy formulation in the Department of Defense and on its management concepts; the second would study management and major programs within Department of Defense and the Joint Chiefs of Staff. The Committee also favored an overseas trip as a part of the Course D.

## History of the Industrial College of the Armed Forces

### Chapter V

Although the most pressing task of the Curriculum Committee was to develop an outline plan and guidance for the 1965-1966 curriculum, there were other matters awaiting its attention. One was the need to define ICAF's long-range objectives and academic philosophies. In September 1964, accordingly, the Committee began work on a statement of academic policies and on a broad proposal to serve as the basis for long-range curriculum planning. The development of the two papers progressed concurrently with the final work on the curriculum plan. The two papers were entitled, "Concept of the Resident Course" and "Proposed Academic Policies".

The Chairman of the Curriculum Committee submitted the proposed plan for the 1965-1966 Resident School Curriculum to the Chairman of the Faculty Board on 14 October 1964. Prompt approval was requested to enable the Committee to complete the preparations of general guidance on curriculum and related matters by early November. This guidance would be the standard "White Book" containing ICAF's charter and mission, the concept of the Resident Course, the academic calendar, course structure, and general information for students and faculty. By early February 1965, the Committee hoped to complete a detailed "Supplementary Guidance, Resident School Curriculum, 1965-1966" for use by the Resident School faculty in drawing up the final schedule.

The Faculty Board approved the Curriculum Committee's paper "Concept of the Resident Course" as well as the curriculum plan and the "Proposed Academic Policies" paper as the first step in preparing guidance for the 1965-1966 program schedule. The Commandant added his approval in November 1964.

Several developments delayed the development of the 1965-1966 academic program after the Commandant had given his approval of the course concept. General Schomburg expressed concern over the workload that the new curriculum would place on the students. He asked whether any portions of the course could be eliminated without incurring a major loss, and what could be done with time that might be gained. He had in mind two elements that could be dropped: the field trips and the oral presentations - both well-established features of the Resident Course.

Taken somewhat by surprise, the Curriculum Committee examined the following questions:

What might be substituted for: (1) the one-week domestic field trip; (2) the two-week overseas field trip; (3) the oral presentations; and (4) any combination of these steps? The Committee was unable to reach agreement,

## History of the Industrial College of the Armed Forces

### Chapter V

although its members strongly supported the industrial field trips. It also supported the overseas trips and suggested the trips might be oriented more directly to the ICAF mission. The Committee offered two proposals:

a. Eliminate the oral presentation program (thus gaining 45 class periods) and instead give each student a choice of several elective courses involving the same amount of time.

b. Since further debate over the overseas field trips would be fruitless, they should either be eliminated or completely reoriented. Possible replacements in Course D for the trips were a simulation exercise, computer indoctrination instruction or some other appropriate activity. In the absence of General Schomburg, and because of the pressure of time, the Deputy Commandant on 15 December 1964, decided that both the overseas trips and the oral presentations should be eliminated.

Within a few days after this decision the curriculum committee completed the "White Book." The central theme of the course, according to the White Book, was the management of logistic resources, materiel programs and systems vital to national security, with primary attention on management within the Department of Defense. The ICAF course could be regarded as applying the two basic disciplines of economics and management to the national security field. The course was tailored to the needs and capacities of mature professional civilians and military officers of diverse experience and education. It made intensive use of techniques that stressed "individual and group participation, a high degree of personal involvement and challenging intellectual endeavor."

The section on methodology reflected new trends in the ICAF program. Emphasis was on participative educational techniques. The small group was the basic educational setting with a lesser role assigned to lectures as in the past. Small group activities included discussions and practical exercises, case-studies, simulation exercises and conventional instruction-discussion sessions. Individual and group research were also featured although changes were made in the research program. All students formerly had to prepare a standard academic thesis. General Schomburg objected to the rigid nature of this requirement as applied in former years. The White Book consequently required each student to participate in a substantial project of individual or group research. This could be a thesis, but it might also be a staff study, committee research paper, or other individual or group written project.

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

The White Book introduced a new curriculum feature - an electives program. The Commandant felt that electives would be a practical way to recognize the diversity of backgrounds of the students by giving them the opportunity to explore new areas while at the same time allowing them to avoid study areas with which they were already thoroughly familiar. The inclusion of electives in the curriculum was decided upon after General Schomburg had asked what could be substituted for the field-trip or oral presentation programs. The curriculum committee consequently proposed that an electives program replace the requirement on each student to make an oral presentation. The White Book, stated therefore, that each student would be required to participate in a program of elective-study, designed to supplement the Resident School program in areas of basic disciplines and environmental studies related to the college's mission.

#### **3. The Instructional Program, 1965 - 1966.**

Following the completion of the White Book the Curriculum Committee, at the request of the Commandant undertook the preparation of the 1965 - 1966 instructional program. One issue that arose was how could students in one committee in Course D profit from the research performed by the members of another committee. The same problem also concerned other units of the course. The procedure established for course D-2 called for each committee to go its own way but it would make an auditorium presentation in the final two weeks of the course.

In one Course D-2 committee project, students examined and analyzed the "Technical, Economic, Military, and Political Evaluation Routine" (TEMPER) - a simulation exercise developed by the Raytheon Company for the Joint War Games Agency of the Joint Chiefs of Staff. Students were asked to weigh TEMPER's potential usefulness in national security planning and policy making as an educational tool, and how it might fit into the ICAF educational program. The student committee would develop a plan for the participation of the entire class in the TEMPER exercise during the final two weeks of Course D.

The elements of the 1965 - 1966 academic program prepared by the Curriculum Committee were staffed with members of the Faculty Board and informally with the Commandant and Deputy Commandant. After the approval of the Faculty Board, the completed program was published as the so-called "Green Book", entitled the "Academic Program, Resident School, 1965 - 1966". It was intended for internal use by the ICAF faculty.



## History of the Industrial College of the Armed Forces

### Chapter V

While the curriculum was being developed, an independent study of the Industrial College's educational philosophy and methodology was also under way. As part of his analysis of the ICAF program, the Commandant had decided soon after taking command, to ask an independent observer, a prominent educator, to study the College and prepare a general report of findings and recommendations. He selected for this task Dr. James E. Howell, Professor of Economics at the Graduate School of Business, Stanford University. Dr. Howell expressed his views to the Commandant during his visit in the fall and winter of 1964 - 1965. His ideas had an influence on curriculum development even before he submitted his written report in March 1965.

A noteworthy feature of the new curriculum was the attention given to executive development. Beginning in Course A and continuing through the resident course was a program of instruction designed to develop execution skills by placing the student in problem-solving and decision-making situations related to the subject areas of the course. The curriculum structured this instruction as the "Executive Development Program," consisting of 20 periods devoted to promoting the students' "executive growth". The new program resulted, in part, from the decision to eliminate the oral presentations and the overseas field trips. Executive development was regarded as an important addition to the Resident Course.

Another addition to the resident course, the elective program, consisted of 12 graduate-level courses of which each student was required to select one. Each course consisted of 22 periods given during courses B and C and the early part of Course D. The list of courses included 8 in the management/defense management areas and one each on science and technology, economic theory, international politics, and applied psychology. Not on this list, but also offered on an optional basis was a public speaking course. At one time it had been a requirement for all students. In the 1964 - 1965 program the course was given as an elective and it was continued on that basis. Students could select this course in addition to the one elective they were required to take.

Another option available to students was participation in the Industrial College - George Washington University program. In previous years the Industrial College had an arrangement with the George Washington University through which ICAF students were able to apply some of their work at the College toward the requirements for either baccalaureate or advanced degrees at the University. George Washington University granted a certain number of credits for the ICAF course and thesis. Participating ICAF students completed

## History of the Industrial College of the Armed Forces

### Chapter V

their degree requirements by taking George Washington courses evenings and during a summer session after the completion of the ICAF school year, and by taking a comprehensive examination in their field.

The George Washington University Program had both critics and supporters. The Board of Advisors, in the spring of 1964, observed that the workload at the Industrial College was sufficiently demanding "that it should not be diluted by encouraging students to do outside work for academic degrees while in attendance at the College." General Schomburg supported this view and questioned the advisability of continuing the arrangement with George Washington University. He became concerned over the ability of students to carry the heavier workload that would be imposed by the 1965 - 1966 curriculum, and the George Washington program taken simultaneously.

Supporters of the George Washington program, both in and outside of the College, contended that it would be unfair to deprive ICAF students of the opportunity to earn advanced degrees. They pointed out that rather than constituting a diversion from the ICAF program the George Washington program supplemented and strengthened it. Often students with the best performance at the Industrial College were also the ones who were attending George Washington University. On the other hand, logic appeared to support the Commandant's position that the newly planned ICAF curriculum would be far more difficult and time-consuming, and that the George Washington classes took a good deal of a student's evening time. Also, since George Washington courses included examinations it would be only natural for ICAF students to spend more time on their George Washington courses than on ICAF courses which had no examinations.

A compromise solution to the George Washington University program issue was finally reached in June 1965. Under a new arrangement, George Washington University agreed to accept three ICAF courses as substitutes for previously offered university classes. These courses, a part of the regular ICAF program, were the executive development course, the scientific decision-making course, and the elective course in economic theory. The courses would be taught by George Washington instructors and ICAF students taking them for credit were required to pass course examinations. Also, although the preparation of a thesis was no longer an ICAF requirement, students in the George Washington program had to prepare a thesis that was acceptable to both the Industrial College and George Washington University.

## History of the Industrial College of the Armed Forces

### Chapter V

Another issue was whether or not students should go on international field trips. The Commandant questioned whether these trips were really in line with the ICAF mission and curriculum. If it was demonstrated that the trips were worthwhile, would it not be possible to focus them more directly on the subject matter of the resident course? Both the Commandant and the Deputy Commandant stressed that they were not opposed to overseas field trips as such, but that any field trip, domestic or overseas, must have a definite purpose closely tied in with the mission of the College.

The decision in December 1964 to drop the overseas field trips was reflected in the White Book, but this action was soon modified in the light of the Commandant's expressed willingness to approve such travel in support of specific course-connected research problems. In accordance with this guidance, the Curriculum Committee recommended travel overseas and in the United States for specific research problems in Course D. In order to clarify this issue, the Commandant stated that he did not want the Green Book to bar overseas travel for any student committee research project. He was strongly opposed, however, to travel merely for the sake of travel. Where travel either in the United States or overseas contributed to student research on a project, such travel should be encouraged.

At the request of the Commandant, consequently, the Curriculum Committee prepared a new statement on travel in support of student research projects. The statement explained that during the two-week period reserved for research on committee projects, this research could be performed anywhere in the world, depending on the needs of the individual project. Where travel in support of committee projects was indicated the statement implied that all student committee members would undertake this travel. Faculty advisors, "should exercise ingenuity and imagination in developing their respective programs." Faculty advisors might also go on exploratory trips but the statement did not indicate whether or not faculty members would actually accompany the students on their trips. This statement was incorporated in the final version of the Green Book.

On the question of faculty travel, the Commandant's policy was similar to his policy for student travel. Faculty members were encouraged to go on research trips that were linked with the mission and curriculum of the Industrial College. In addition to such short research trips the Commandant also instituted a new sabbatical leave policy whereby a faculty member who had served at the Industrial College for six or more years could be given a year away from the College for study, research and travel on

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

projects of "interest to the College and to themselves." Two senior faculty members were awarded sabbatical leave for the 1965 - 1966 academic year.

With the publication of the Green Book in June 1965, the task of implementing this plan was undertaken by the Resident School. The new curriculum plan was put to the test in the 1965 - 1966 academic year. Several questions remained to be answered. Were the program changes too extensive and too abrupt, and could the faculty make the necessary adjustments? An immediate problem was a critical lack of faculty experience and expertise in certain areas of the new curriculum. This problem was not helped by the assignment of several staff members to the new Office of Academic Plans and Research at a time when more instructors were needed.

The core program of the new curriculum consisted of 4 courses, designated as A, B, C, and D, with each of the first 3 containing 3 units, and Course D, with 2 units. Course A, covered general environmental factors related to national security and basic economic and management principles that applied to defense management and decisionmaking. In general it resembled the previously offered Foundations course. As in that course, it included a computer-assisted simulation exercise on business decisionmaking in a free-market economy. New, however, was a data processing familiarization course.

Course B, the Management of Natural Resources, presented a broad survey of human, natural, and developed material resources - all in the context of national security. The course included a one-week industrial field trip, and a one-day visit to selected firms in the Washington D.C. area.

The first unit of Course C, the Management of National Security, examined the processes by which national security policies are formulated and translated into requirements and programs. It included three case studies of post - World War II crises. The second unit examined major national policies and programs that contribute to national strength. The concluding and longest unit of Course C focused on national policies and actions for dealing with existing or potential external threats to the United States. Selected critical problem areas that posed a threat to American security or interests were examined in depth.

Course D, Management in the Department of Defense, was a logical culmination of the academic program. The first of its two units was a detailed study of management, planning and decision-making in the Office of the Secretary of

## History of the Industrial College of the Armed Forces

### Chapter V

Defense and the Joint Chiefs of Staff, and management philosophy and policies throughout the Department of Defense.

The overseas field trips of previous years was replaced by a two-week, project-oriented, field research program in Unit D-2. Each student committee studied a specific program or problem area within the Department of Defense. Where appropriate this study included field trips both in the United States and abroad. About two-thirds of the class participated in projects that required travel while the remainder pursued their research in the Washington area. Places visited included U.S. military headquarters at home and overseas, major allied headquarters, foreign government ministries, research and test centers, industrial plants, universities and military schools. The whole program was regarded as more in consonance with the mission of the College than were the overseas trips of previous years.

A new version of the so-called TEMPER simulation exercise was included in Unit D-2. A team of six specially qualified students worked on the preparation of this exercise throughout the year. The student committee redesigned and simplified the TEMPER model to serve as a gaming vehicle and trained a group of ICAF students to serve as a control team. Based on this model, the combined group conducted a limited-war cold-war game, entitled TEMPER 66, with full class participation in the last two weeks of the academic program. The exercise was well received. It served to bring together in a single problem situation, many facets of the entire academic program.

The "core" program was supplemented by special courses conducted primarily by contract with outside institutions and individuals. The first was a required six-week Scientific Decision-Making course, starting in mid-September, 1965. Entirely new to the Industrial College, the course was a concentrated study of the mathematical principles and techniques used in decision-making in business, and in the defense establishment. Since the ICAF faculty was unable to present the subject matter involved an agreement was reached with the Research Analysis Corporation to prepare and conduct the course.

The new course aroused considerable interest outside of the Industrial College. Despite its favorable reception the course encountered serious difficulties. The focus of the course on quantitative analysis was too difficult for many students who were weak in mathematics. Some students found it hard to absorb the complex materials that were presented.

## History of the Industrial College of the Armed Forces

### Chapter V

The second required supplementary course was Executive Development - a 20 session course running from October to April. Conducted by both ICAF faculty members and outside instructors, the course was designed to develop executive skills by placing the students in problem-solving and decision making situations. The course content was not entirely new, but it provided more depth of treatment and it made extensive use of case studies.

The electives program was perhaps one of the most successful innovations introduced in the 1965 - 1966 program. The course were taught entirely by outside instructors. Twelve courses were offered but only eight attracted sufficient students to justify engaging an instructor. The most popular course, Contemporary Economic Theory, drew more than half of the ICAF students. It was especially attractive since it had been accepted as a credit course by George Washington University for students participating in the ICAF-GWU cooperative advanced degree program.

Student research continued to be an important and integral part of the Resident program, but several changes were introduced in 1965 - 1966. More emphasis than before was placed on the study of current management-related problems of interest to the Department of Defense. Most of the topics selected were taken from lists compiled by various Defense agencies of problems that were of immediate concern to them. Students were permitted to form small research teams to work on projects that lent themselves to collaborative effort. Invitations were also extended to specially qualified students to devote their research to studies that would contribute to ICAF programs. Such projects included educational methodology, the development of course study materials, and other contributions of which the TEMPER simulation discussed above was an outstanding example. Finally the usual requirement that research projects be presented in a formal thesis format was dropped. Students were encouraged to present their materials in whatever form was most appropriate, as for example, a staff study, a statistical compilation, an article or a chapter in an ICAF textbook designed for the Correspondence Course.

Few changes were made in methodologies in the 1965 - 1966 academic year. The emphasis on participative action-oriented learning, primarily in a small-group environment was intensified. The time spent by students in small-group activities increased from less than 200 periods in the previous year to nearly 300 in 1965 - 1966. A variety of techniques were used to foster student participation, including case studies, simulations, role playing, seminars,

AD-A133 324

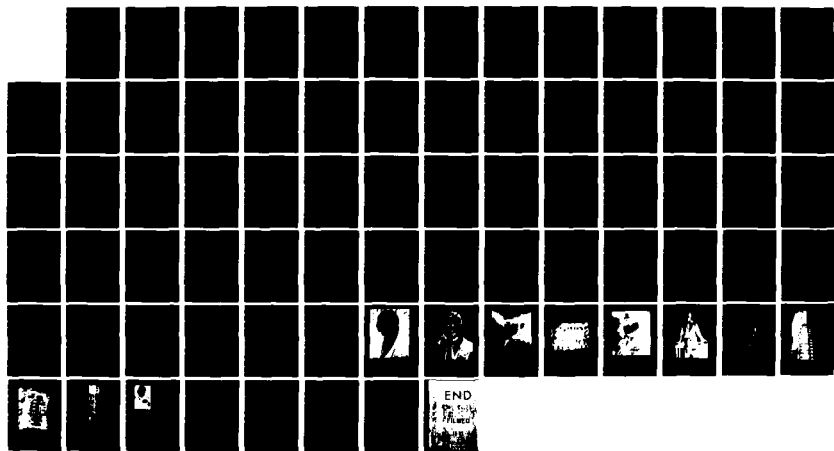
HISTORY OF THE INDUSTRIAL COLLEGE OF THE ARMED FORCES  
(U) INDUSTRIAL COLL OF THE ARMED FORCES WASHINGTON DC  
T W BAUER 1983

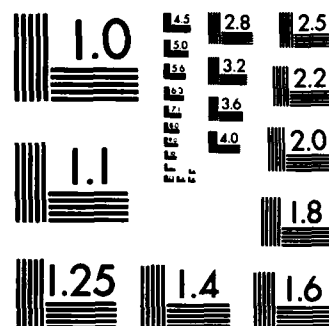
2/2

UNCLASSIFIED

F/G 15/7

NL





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A



## **History of the Industrial College of the Armed Forces**

### **Chapter V**

and task-group assignments. This trend increased the importance of the role of faculty members as teachers. During the year efforts were made to improve the skills of faculty members in the techniques of small-group instruction and discussions. The faculty also had to give more emphasis to the developing of suitable research and reference materials. Meanwhile, the number of formal auditorium lectures was reduced to less than 150 as compared to 250 in the previous year.

A new student performance evaluation system was introduced in 1965 - 1966. Its aim was to select the top 10 percent of the class and the next 15 percent, as well as the top 5 percent in each Service (for the Navy this included the Marine Corps). The system was based on faculty appraisals.

The ICAF-George Washington University Cooperative degree program was also changed in order to allow students to take this program without interfering with the work required by the ICAF curriculum. In 1965 - 1966 students in this program received 3 semester hours credit each for completion of the ICAF courses in Scientific Decision-Making, Executive Development and Contemporary Economic Theory, 6 hours credit for their research project and 7 hours for the rest of the core program. Students could earn the remaining 8 required hours by attending the summer session at the University following their graduation from the Industrial College.

Upon the completion of the 1965 - 1966 academic year it was very evident that extensive changes had been made in the curriculum. It was also clear that the turbulence in curriculum planning and execution was still in progress.

#### **4. Planning for the Future**

As guidance for curriculum development in future years the Industrial College prepared a long-range plan with the expectation that the plan would be updated annually. The first such plan, covering the period 1966 - 1971 was prepared by the Office of Academic Plans and Research in the spring of 1966. The Resident School program for 1967 - 1968 reflected the first year of this plan.

In looking beyond academic year 1967 - 1968, the plan anticipated that attention would focus on changes in methodology rather than on program content or structure. More emphasis was anticipated on the problem-solving approach where this method was appropriate. In the Long-Range Plan, Course D was scheduled for revision in 1968 - 1969 and Course B in the next year.

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

The Long-Range Plan also projected an increase in the relative weight of the electives program. By 1970 - 1971 it was anticipated that in addition to the three required courses beyond the core, each student would select three courses from the list of electives. Spread over the academic year these six courses would constitute from one-quarter to one-third of each student's program.

The Resident program was expected to give increasing emphasis to computer-assisted instruction. Computer-based simulations were already well established. It was anticipated that such instruction would be expanded as additional simulations became available.

Progress toward additional use of computers was already under way, both for simulations and for other educational applications. A remote terminal was installed during academic year 1966 - 1967 and was used to familiarize a group of faculty members with computer operations. The installation of additional terminals was projected for the next academic year. Tie-in arrangements were concluded with the General Electric System at Valley Forge, Pennsylvania, for storing data to be used by the College.

The increased use of computers made it essential to develop the capabilities of faculty members to handle computer-assisted programs. For most faculty members, the objective would be familiarization, the ability to use remote terminals in simple classroom applications and to assist in computer-based simulations. Also needed was a staff of experts who were familiar with the capabilities and limitations of computers.

The Long-Range Plan included three provisions for faculty development: The College should improve its recruitment methods, especially for military faculty members; ICAF should modify selection qualifications criteria by reducing the level of rank, age, and years of experience and raise the required level of education; and it should promote faculty improvement through additional educational and professional experience.

The Long-Range Plan also outlined a comprehensive research program supporting the mission of the Industrial College - research to be performed by faculty members, students and outside sources as necessary. Major research subject areas were: the changing profile and educational needs of incoming students; changes in student's attitudes while at the Industrial College; effectiveness of methodologies and programs; development of specific course materials; and in-depth evaluations of the curriculum.

## History of the Industrial College of the Armed Forces

### Chapter V

#### 5. The Management Education and Training Study

Did the role assigned to the Industrial College as the "capstone" of management education and training in the Defense Establishment envision an expanded role for the Industrial College in that area? To explore this question the Joint Chiefs of Staff in August 1966 appointed General Schomburg Chairman of a Management Education and Training (MET) Study Group. Members of the Group included the Commandants of the Air and Army War Colleges and the Chief of Staff of the Naval War College. Most of the substantive work on the MET study was performed by a working group of military representatives of each Service and members of the ICAF planning staff, meeting at the College.<sup>5</sup>

The working group attempted to identify the management education needs of the Defense Establishment and to determine which of these needs the Industrial College could meet. The group assumed that as before, the Industrial College would not be required to perform any coordinating, supervisory, or directive functions for management instruction in any other Defense educational institution. Such coordination became the province of the Defense Management Education and Training Board established in September 1966 under the Assistant Secretary of Defense (Manpower).

The final report of the MET Study Group submitted to the Joint Chiefs of Staff on 31 December 1966 recommended only a slight modification of the ICAF mission to expand the functions of the College in applied research; communications, and educational services. It expected the College to play a greater role in management innovations, educational methodology and in determining defense management requirements. The MET report concluded by recommending that the College give more emphasis to developing defense management educational materials and methods. The Joint Chiefs of Staff took no action on the MET proposals. For the Industrial College, its participation in the MET study brought a better understanding of the needs and requirements of defense management education. More important, after an exhaustive study, the MET investigation could find nothing basically wrong with how the Industrial College was performing its "capstone" responsibilities. This appeared to confirm the effectiveness of the Industrial College's instruction in the management of defense resources.

<sup>5</sup> This discussion is based on Stanley L. Falk, The "New Industrial College, 1965-1967", 1968, pp. 30-31.

## History of the Industrial College of the Armed Forces

### Chapter V

#### D. Extension Programs

##### 1. The National Security Seminar Program

The National Defense Resources Conferences were redesignated as the National Security Seminars in Fiscal Year 1963. As before, each seminar presented a two-week condensed version of the Resident course in 32 or 33 lectures supported by films and related materials. The emphasis was on national security problems and issues seen through the eyes of faculty members of the Industrial College.

With the growth of the seminar program the Joint Chiefs of Staff took steps to insure firm military control of the seminars. In December 1962 the Joint Chiefs directed the Industrial College to make sure that the leading role in conducting each seminar be assigned to military authorities rather than to chambers of commerce or other local civilian authorities. In consequence, the Industrial College followed the policy of asking the primary local military sponsor for each city scheduled for holding a seminar to appoint a local project officer (active duty or reservist) to make the local arrangements. The project officer would work closely with a representative of the Industrial College. As before, a key element in sponsoring a seminar was the active support of the local chamber of commerce. Thus, although the military sponsorship received more emphasis, there was little change in how the seminars were conducted.

Meanwhile, the program continued to grow. In Fiscal Year 1964, enrollment reached a new high of 10,435 persons, and 3 of the 14 sponsoring cities had an attendance of over 1000 each. The number of graduates (persons completing the seminar) was given as 6,237 persons. The next year another record was set with 11,176 attendees. The 3,223 military persons in attendance included a large number of active duty personnel. This rising trend was interrupted by a sharp reversal in Fiscal Year 1966 when attendance totalled only 7,600 persons. A factor was the cancellation of the Dallas seminar because no suitable auditorium could be obtained.

The decline in Fiscal Year 1966 prompted General Schomburg to curtail the 1966 - 1967 seminar program to eight localities in addition to the "shakedown seminar" held annually at the Industrial College. The Commandant felt that the seminar program needed a critical examination - none had ever been made and for that purpose he appointed a Study Group in 1966.

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

The Study Group submitted its report in September 1966, but before considering its findings, General Schomburg took a more decisive step. Late in 1966 he proposed to the Joint Chiefs of Staff that the Industrial College be authorized to discontinue the National Security Seminar Program. In its place he proposed one-week seminars in Defense Management for Reserve and Active Duty Officers and selected civilians - the seminars to be held at Army posts, and the general public would be excluded. These proposals were disapproved by the Joint Chiefs of Staff in March 1967.

As for the Study Group, it recommended that the Seminar program should adhere more closely to the basic mission of the Industrial College as defined in the 1962 charter. This mission was the education of reserve officers, and the attendance of civilians should be strictly incidental. The Study Group recommended more student participation - through group activities, round tables, case studies, simulations, and question and answer periods. Such changes would require a larger faculty, and a shift in emphasis from the size of the audience to the quality of its members. The Commandant determined that these proposals could not be implemented. Instead he decided that the main change should be to realign the seminars more closely with the Resident program and to strengthen their professionalism.

Meanwhile, the seminars were continued on a more modest scale. In Fiscal Year 1967, the program was restricted to seven locations, with a total enrollment of 4,645 persons. A reason for this reduction was that because of fiscal considerations both the U.S. Navy and the U.S. Air Force indicated that they could not meet their normal quotas of reserve officers to be assigned to the seminars.

#### **2. The Correspondence Course**

Active enrollments in the Correspondence Course were relatively stable during the period 1963 - 1967 averaging about 5,700 a year. The number of graduates continued to be quite low, ranging from 2,600 in 1963 to 2,033 in 1967. The number of foreign enrollments reached a high of 972 students (32 countries) in Fiscal Year 1963. A decline then set in and only 456 foreign nationals were enrolled in Fiscal Year 1967.

In 1964 the Commandant directed the Correspondence School to implement a quality improvement program. More selectivity was to be exercised in the acceptance of applicants. More emphasis was placed on contacting students for follow-up actions. Meanwhile, strenuous efforts to revise the textbooks and the examinations were continued. The course then consisted of the following five units: I.

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

Foundations; II. The Resources Base for National Security; III. Defense Logistics Management; IV. Foreign Aspects of National Security; V. Plans and Programs for National Readiness.

The Correspondence School reoriented its program to emphasize defense management in the same manner in the Resident Course. The goal continued to be a three-year cycle of textbook development and revision. On 1 December 1965 the name of the course was changed from "The Economics of National Security" to "National Security Management" - its present name.

The growing number of students in Latin American countries had led to suggestions that the textbooks be translated into Spanish and Portuguese. On the recommendation of the Board of Advisors, the Industrial College made such a proposal to the Joint Chiefs of Staff on 5 April 1963, but no action was taken on the matter by the Joint Chiefs.

A memorable event was the preparation in collaboration with the Office of the Secretary of Defense of the new textbook A Modern Design for Defense Decision - A McNamara, Hitch, Enthoven Anthology. This book provided a convenient summary of the concepts and procedures for system analysis which were being emphasized at that time in the Department of Defense.

The Correspondence Course continued to attract a large following. In Fiscal Year 1966 it registered 5,972 active enrollments, including 678 students in 40 countries. A factor that year was the addition of over 1500 U.S. Marine Corps reservists participating in voluntary training units.

Acting on instructions from General Schomburg, the Industrial College developed a new short correspondence course entitled "Management in the Department of Defense." The course used selected correspondence course textbooks and paralleled the final course of the Resident program. Launched in the summer of 1967, the new course was designed for active duty officers of the rank of Major/Lieutenant Commander and higher, Federal employees GS 11 and over, and executives in defense related industries.

Another innovation was the establishing of a program for the preparation of monographs on selected defense activities. Designed to supplement the textbooks, the monographs soon proved to be a valuable addition to the correspondence programs. For example, James Schlesinger who later became Secretary of Defense authored a stimulating and thoughtful study on military command and control.

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

#### **E. The Board of Advisors**

The Board of Advisors continued to play an active role under the leadership of Vice Admiral Rufus E. Rose, USN who succeeded General Mundy as Commandant on 1 July 1961. The Board repeated its recommendations of previous years that the Industrial College improve the conditions of employment for civilians, especially the salary levels. In the opinion of the Board, such action was a necessary prerequisite for raising the quality of the professional civilian faculty members. The prospects for the adoption of such recommendations were not very promising. The Joint Chiefs of Staff and the Civil Service Commission had turned down earlier ICAF proposals for higher grade and salary levels for its professional civilians. In support of its recommendation the Board contended that under existing conditions the College was at a serious competitive disadvantage in obtaining and retaining highly qualified faculty members. A position of professor of management was vacant for over a year because of unsuccessful recruitment efforts. The Board again recommended the establishment of several supergrade positions.

On the issue of the consolidation of the Industrial College and the National War College then before the Joint Chiefs of Staff, the Board at its March 1964 meeting expressed its conviction that the colleges should continue as separate institutions. The two colleges, however, should continue their efforts to increase their coordination.

The March 1964 meeting attended by a representative of the Joint Chiefs of Staff and the Deputy Assistant Secretary of Defense (Education) also examined the Industrial College - George Washington University Cooperative degree program. The Board expressed reservations over "the possible dilution of effort and attention on the part of the students" by students working for academic degrees while they were attending the Industrial College.

In another action, the Board recommended that Service selection boards should recognize the education received at the Senior Service Colleges as "commensurate" with degrees from colleges and universities.

The ambitious new curriculum developed under the leadership of Lieutenant General August Schomberg, USA who became Commandant on 1 August 1964, aroused the concern of the Board. At its April 1965 meeting the Board emphasize the need to expand the faculty in order to properly accommodate this new curriculum.

## **History of the Industrial College of the Armed Forces**

### **Chapter V**

Several changes were made in the Board by General Schomberg. For the first time an active duty officer became a member of the Board with the appointment of Lieutenant General William J. Ely, USA. General Schomberg increased the membership of the Board from 11 to 15 persons as the first step in implementing a new policy of rotating its membership every three years. The five senior members would retire and five new members would be appointed each year. General Schomberg also introduced a plan for achieving a better balance in Board membership. Henceforth appointments to the Board would be from the following fields:

- 3 members from Education
- 1 member from Science
- 6 members from Business/Defense
- 1 member from Labor
- 1 member from Foreign Affairs
- 3 members from undesignated fields.

In a departure from a well established pattern, the Board of Advisors met twice in academic year 1965 - 1966 - in October and April. At the spring meeting the Commandant of the National War College, Vice Admiral Fitzhugh Lee attended as an observer. It was planned that the Commandant of the National War College would attend future Board meetings and that the Commandant of the Industrial College would attend meetings of the National War College Board of Consultants. These developments illustrate General Schomberg's aim to strengthen the Board and to increase its effectiveness.

The Board in 1966 supported the planned expansion of the electives program and efforts to improve the quality of the faculty. At the same time it opposed the introduction of any system of grading resident students. Aware of the importance of maintaining ties with the alumni of the Industrial College, the Board proposed that the College publish a quarterly journal of selected lectures and articles.

The Board of Advisors had become an active and influential body by 1967 - the year that General Schomberg completed his assignment as ICAF Commandant. Over the years the Board had participated in the growth and development of the college. Successive Commandants had relied on it for counsel and for support in their relationships with the Joint Chiefs. The Board was not content with perfunctory visits at the College during which it would be exposed to carefully tailored briefings on the achievements of the College. Instead the Board developed a tradition of involvement in the problems and issues that faced the institution. The Board was not content with the development



## **History of the Industrial College of the Armed Forces**

### **Chapter V**

of the Industrial College as a good educational institution. Instead, it urged the College to set as its goal the attaining of excellence in its educational programs. This motivation frequently was expressed in recommendations that were highly desirable, but were not always practicable or attainable. The Board of Advisors continued to play an important role after the departure of General Schomburg, but it did not become as heavily involved in problems and issues as in the period 1954 to 1967. This does not detract from the fact that the Board had made a substantial contribution to the development of the Industrial College.

## **History of the Industrial College of the Armed Forces**

### **Chapter VI**

#### **VI. A Period of Evolutionary Growth, 1967 - 1975**

##### **A. The "New Industrial College"**

The curriculum of the Industrial College was thoroughly analyzed and reviewed under the direction of General Schomburg in the 1964 - 1966 period. No aspect of the College escaped this review. The resulting changes in organization, curriculum and methodologies were so numerous that General Schomburg referred to the outcome as "The New Industrial College". Beyond doubt, the College was given a more specific orientation and it became imbued with a reinforced sense of purpose. The term "New Industrial College," however, should not be taken too literally. The fundamental purpose of the College to provide instruction in the economic aspects and factors of national security remained in place. What was changed was the emphasis given to instruction in the management of defense resources and to all other important aspects of management in the Department of Defense.

The changes in the ICAF program sparked by the 1962 charter and continued by General Schomburg as Commandant gave the Industrial College a strong defense management orientation. Before this development the ICAF curriculum had undergone a broadening process. The basic mission of the College of providing instruction in the economic basis of national security in time was broadly interpreted to cover a wide array of subjects. The narrowing of ICAF's focus by the changes introduced in the period 1962 - 1965 did facilitate the establishing of educational objectives. In this process, however, the Industrial College had to re-emphasize that its mission was to educate and not to train. The training of managers in specific skills was a concern of lower levels in the educational structure of the Defense establishment. This distinction was not always recognized despite repeated ICAF efforts to avoid such a misunderstanding.

The 1966 - 1967 academic program, as noted above, was regarded as a "trial run," following the extensive curriculum changes of the preceding two years. Based on the experience gained that year further changes were made but at a more deliberate pace. Guidance for curriculum changes was provided by the Long-Range Plan. The Resident School plans called for a major program review every other year. Each such review would include an in-depth study of a specific area of the instructional program.

During the 1967 - 1975 period several changes and adjustments were made in the instructional program in response to prevailing trends and new developments.

## **History of the Industrial College of the Armed Forces**

### **Chapter VI**

Incoming students were better educated and somewhat younger. The wide range in backgrounds and interests of the student necessitated the offering of certain required courses at different levels of sophistication. This had to be done to avoid subjecting students to instruction in areas with which they were thoroughly familiar. The diversity of student backgrounds always compounded the task of developing the most effective core program.

The use of computers for simulations and other instructional purposes increased steadily during this period. With regard to other methodologies, emphasis was continued on various forms of problem solving and on small-group activities. The number of elective courses was increased and more reliance was placed on the electives program.

The subject matter covered in the curriculum changed very little during the period but there were shifts in emphasis from time to time. There also were frequent rearrangements in the sequence of subjects accompanied in changes in how the same materials were presented.

During this period the ICAF educational program was subjected to continuing refinements - to fine tuning - in the never-ending quest to develop the best possible, and most effective curriculum.

The year 1974 was memorable in that it marked the fiftieth anniversary of the Industrial College. In the ceremony held on 25 February 1974 - the anniversary date - the guest speaker was Admiral Thomas H. Moorer, USN, Chairman of the Joint Chiefs of Staff. Sharing the spotlight with Admiral Moorer were 12 returned prisoners of war from the Vietnam conflict (eight U.S. Air Force and four Naval officers) who were members of the Class of 1974. Since the members of the class had been selected before the return of the former POWs the size of the class was raised to 190 to make it possible for them to attend the Industrial College in 1974 - 1975. This was the largest class in ICAF's first half-century of growth. Lieutenant General Walter J. Woolwine, a member of the class of 1963 and then the Commandant of the Industrial College presided over the anniversary ceremonies.

The fiftieth year ended rather uneventfully. There was little indication, however, that the next half-century would begin the same way. By 1975 some changes were overdue in organization and curriculum. More important, it soon became evident that the Industrial College would be subjected to

## **History of the Industrial College of the Armed Forces**

### **Chapter VI**

careful scrutiny as part of a comprehensive examination of the role of the senior military schools in the Defense Establishment.

The Industrial College continued to be concerned over the problem of prestige. In his final report to the Joint Chiefs of Staff, in 1970, the Commandant, Lieutenant General John S. Hardy, USAF referred to this recurring issue. He noted that the number of Industrial College graduates selected for general or flag rank had seldom exceeded 20 percent for any class. The comparable figure for the National War College was upward from 35 percent. General Hardy observed that he had not seen any significant improvement in recent years.

#### **B. The Educational Levels of Incoming Students**

Representative figures for the ICAF classes from 1967 to 1975 show that an impressive number of incoming students had a strong educational background. The educational level of the Class of 1967 was exceptionally high: 96 students of a total of 180 in that class had advanced degrees when they came to the Industrial College including 10 with doctorates. However, 20 incoming students of that class had no degrees.

After several years of decline, the numbers of incoming students with advanced degrees again rose, reaching a record high of 109 in academic year 1971 (including seven students with doctorates) and again in the following year (five with doctorates). Members of the class of 1975 included 107 members with advanced degrees (10 with doctorates). Another development was the steady decline in the number of students who had no degrees when they came to the Industrial College - from a high of 20 in the Classes of 1967 and 1968 to only one in the Class of 1975.

The rising educational levels of incoming students, as noted above, had a significant impact on the educational program. The ICAF staff and faculty faced the challenge of meeting the high expectations of the students. As expressed by the Commandant Vice Admiral J. V. Smith in his annual report to the Joint Chiefs of Staff on operations in 1972, "Like the Red Queen, we have to run and keep running lest we fall behind." In view of the wide range of the educational backgrounds of the students, some courses had to be presented at different levels of sophistication. Another consequence of the higher educational backgrounds of ICAF students was the declining number of participants in the Industrial College - George Washington University Cooperative Advanced Degree Program: in 1966 - 1967, 75

## History of the Industrial College of the Armed Forces

### Chapter VI

students participated in the program, but in 1974 - 1975 only 31 students were enrolled.

#### C. Curriculum Development

##### 1. The 1967 - 1968 and the 1968 - 1969 Programs

The framework of the Resident program was well-defined by 1967. All students were required to take the Foundation courses and the Core courses, and to select a specified number of courses from the Electives program. The semester-length Foundation courses provided instruction in basic disciplines. The Core program, on the other hand, consisted of successive courses. These "building blocks" as they were referred to originally when the curriculum was restructured in 1964 - 1966 period, constituted the heart of the ICAF program. Their number ranged from five to seven courses in the 1967 - 1975 period.

Methodologies employed continued to follow traditional patterns. Increased emphasis was given to small-group discussions and active student involvement. Problem-solving was also emphasized and more and more use was made of case studies. Computer-assisted simulations by now had become common.

Lectures by prominent persons from within and from outside of the Federal Government continued to be a prominent part of the curriculum, but they were reduced in number. Other standard features were the industrial field trips (usually one week) and the overseas trips (generally two weeks, late in the academic year).

The process of fine-tuning the instructional program is illustrated by the successive annual reports of the Commandant of the Industrial College to the Joint Chiefs of Staff. A review of these reports demonstrates that efforts to improve the Resident program were continuous and intense. These efforts were rewarded by the reputation of excellence attained by the Industrial College.

In 1967 - 1968 efforts continued to find ways to simplify the educational program, especially through the elimination of duplication. Students already familiar with a subject area were encouraged to substitute elective courses.

Plans were drawn up to expand both the elective and the optional course programs in 1968 - 1969. Thus the program for that year would offer 16 elective and 8 optional courses. This expansion came about, in part, because of the decision that students should be given the option of taking

## History of the Industrial College of the Armed Forces

### Chapter VI

another elective course and to prepare three short papers instead of the traditional requirement of a major research report or thesis. It was no surprise that this option became very popular.

Computer-assisted simulations were emphasized in the 1967 - 1968 academic program. The three simulations in that program were a Management Decision-making Exercise (MDE); an International Relations Exercise (IRE); and another version of the TEMPER exercise. Under development during the year was a Defense Management Simulation (DMS). The DMS was an adaptation of the Program Management Simulation Exercise played by each class at the joint-Service Program Management School at Wright-Patterson Air Force Base. This new simulation exercised the skills and knowledge needed by defense managers. It excluded the political and foreign affairs aspects already covered in the International Relations Exercise. The new simulation was developed as a replacement for the TEMPER exercise.

Ten new case studies reflected the continuing emphasis on the problem-solving approach. Another development in 1967-1968 was the increased coordination with the National War College especially in the higher number of joint lectures and intelligence briefings. Elective courses were opened to students of both colleges.

Three of the four courses in the Foundations program were again offered in the 1968 - 1969 academic year. They were: Economics; Quantitative Methods; and Management Theory and Practice. The fourth course offered in the previous year, Automated Data Processing, was discontinued and the subject area was incorporated in the core program as needed.

The Core Program had grown to six courses in the 1968 - 1969 academic year. The names of these courses and the time assigned to each are shown in the following tabulation.

<u>Course</u>	<u>Resident School Core Course, 1968 - 1969</u>	<u>Number of Weeks</u>
410	The Environment of National Security	4
420	Basic Resources	4
430	Industrial Resources	8
440	National Security Problems and Policies	5
450	National Economic Problems and Policies	4
460	Management in the Department of Defense	15

## History of the Industrial College of the Armed Forces

### Chapter VI

The last course, Management in the Department of Defense, was regarded as excessively long and detailed. As a consequence the course was shortened to 12 weeks for Fiscal Year 1970, and the time gained was distributed to other courses.

The Resident School concluded that the optional courses program which provided instruction in basic skills, such as public speaking and effective reading, had become too popular. It was argued that students were overloading their schedules with such courses. In 1968 - 1969, consequently, optional courses were replaced by ad hoc workshops for critical skills areas to be taken as needed.

A change was also made in the role assigned to the international field trips. In academic year 1967 - 1968 the trips were designed to provide research support for group studies. This concept was replaced the following year by the rationale that the trips supported the ICAF mission as a whole. Also planned for 1969 - 1970 were one-day visits of the U.S. Congress, the Department of State, and local industries.

In the fall of 1969 an interdepartmental curriculum committee studied the Resident Program and offered proposals for changes for the 1971 - 1972 academic year. The committee report issued in the spring of 1970 resulted in the adding of a seventh core course for the last four weeks of the school year. Entitled "National Security Management in Perspective" the course included the two-week international trips which were followed by a week of student reports and small-group studies. The final week of the course featured lectures by distinguished persons.

The student research program was stimulated by a Secretary of Defense directive in 1970 which required that ideas and papers developed by military schools be made available to Defense agencies. This provided an incentive for strengthening the ICAF student research program. The Industrial College forwarded selected student research papers to Defense agencies. Some student papers were also published in "Perspectives in Defense Management." This ICAF publication begun in 1967 and issued nonperiodically about three times a year was distributed to interested Defense and other agencies. It included texts of lectures delivered at the College as well as papers prepared by faculty members and students.

## History of the Industrial College of the Armed Forces

### Chapter VI

#### 2. The ICAF Curriculum 1970 - 1974

Upon the conclusion of the 1970 - 1971 academic program the Commandant, Vice Admiral J. V. Smith reported to the Joint Chiefs of Staff that there had been very few changes in the curriculum. The ICAF program for that year closely resembled that of 1968 - 1969 except for the addition of a seventh Core course - Course 470 - National Security Management in Perspective - a change discussed in connection with the 1968 - 1969 curriculum. An ongoing development was the increased attention given to problems of the social and physical environment both in the United States and worldwide - a development begun in 1969 - 1970. In the 1970 - 1971 curriculum, Environmental Studies were included in the Basic Resources course in the Core program.

The 1971 - 1972 Resident Program also was basically unchanged but there were several interesting developments, especially in planning for the future. The year began with a six-day "prologue" consisting of forceful and even controversial lectures and unstructured student discussion periods. The purpose was to set the stage for the entire academic year.

The three computer-assisted simulations developed in previous years (the Management Decision-making Exercise, the International Relations Exercise, and the Defense Management Simulation) were thoroughly reworked in 1971 - 1972. In his Fiscal Year 1972 report to the Joint Chiefs of Staff, the Commandant, Admiral Smith emphasized the importance of instructing students in the use of computers and in automatic data processing (ADP). Admiral Smith stated that "I believe that no student should leave the College without at least the minimum knowledge of automatic data processing and its applications that a defense manager needs to control large operations using this technology." In 1971 - 1972, automatic data processing was removed from the Core program and was included in the electives and workshops with instruction given at the elementary, the intermediate and the advanced levels - all on an optional basis.

In the Core program, the final course "Management in the Department of Defense," all major facets of Defense administration were studied. The nine-week course was reorganized to provide a more methodical treatment of the management of the "3 Ms", namely, Money, Material and Men, with special emphasis on the latter.

Significant changes were made in the three foundation disciplines: management, economics and scientific decision-making. The 30-hour courses given in those subjects had to be attended by all students except those with prior



## **History of the Industrial College of the Armed Forces**

### **Chapter VI**

instruction in those areas. In 1971 the decision was made to offer these courses at different levels of difficulty in order to accommodate students with varying backgrounds. In 1972-1973, courses in those subject areas were offered at both a basic and an advanced level. A student with an academic background in any one of those courses could now take a more advanced and challenging course in the same field. This made it unnecessary for the student to take an elective course in another field - a change that was expected to reduce the demand for elective courses.

The curriculum review process utilized the responses from opinion surveys of former ICAF graduates. The responses from the class of 1966 and 1967 and year-end questionnaires distributed to the class of 1971 were used in planning the curriculum for the 1972 - 1973 academic program.

The program for that year again opened with a two-week introductory course which served as a prologue for the entire year. The academic year concluded with addresses by prominent speakers.

The Electives program was subject to frequent modifications. In the 1968 - 1969 academic year each student usually was allowed to take one elective course at a time. In the next year he could take two additional courses as a result of the liberalizing of the research requirement. Additionally, students who had the equivalent of one of the Foundation courses before coming to the College could take an elective course instead. A major change in 1970 - 1971 was the introduction of short (seven-week) courses. Meanwhile the number of subjects offered in the Electives program continued to grow. The eight courses in the 1969 - 1970 program grew to 19 the following year and 35 standard length and short courses were offered in 1971 - 1972.

In the student Research program, the emphasis on exploring defense-related subjects took several forms. Problem areas of interest to the Department of Defense were identified in advance. Students selected for the 1971 - 1972 academic year, on arrival, were presented with a list of selected Defense problems compiled by DOD officers and agencies. How thoroughly such problems could be explored, however, was doubtful from the start because of the popularity of the short-paper option. In the 1970 - 1971 academic year, 139 of the 180 students chose to take two additional elective courses and prepare the required two short papers rather than to undertake a major research project.

## History of the Industrial College of the Armed Forces

### Chapter VI

The small number of major research projects undertaken by students in 1970 - 1971 was a matter of considerable concern. The Department of Defense had urged the Industrial College as well as other military schools to encourage students to conduct research in defense problems. A major effort was made in the 1971 - 1972 academic year to acquaint students with DOD's drive to channel senior military college research programs into defense problem areas. The response was very favorable. Nearly half of the members of the Class of 1972 selected major defense-related projects.

A noteworthy development related to the Research program was the participation of ICAF students in the Blue Ribbon Defense Panel's study of the Department of Defense in 1969 - 1970. At the request of the Panel, 21 ICAF students undertook studies of the Defense Planning, Programming and Budgeting System in lieu of the required research reports. The students organized into three committees, and prepared separate reports on planning, programming and budgeting. These reports were then combined into a single report on the entire planning, programming and budgeting system.

The Industrial College expanded its Research program by establishing an ICAF Research Fellows Program in Fiscal Year 1970. Approved by the Joint Chiefs of Staff, the program permitted the selecting of up to three students from each class to remain at the College for another year after graduation to undertake research projects in various aspects of national security management. Nominations for ICAF Research Fellows assignments required the approval of the Joint Chiefs of Staff.

As an experiment, the Resident School in 1972 - 1973 offered a "Great Books" reading program. In the first semester of that year, all students read De Tocqueville's Democracy in America and Walter Lippman's, The Public Philosophy. In the second semester, students were allowed to make their own selections from a list of about a dozen books. Most students expressed their interest in this venture and plans were made to continue the program.

In an action prompted by the Long-Range Plan, the College in Fiscal Year 1970 reviewed the ICAF - GWU Cooperative Master's Degree program. Continuation of the plan was supported, but the review determined that the Master of Science in Business Administration (MSBA) was not an appropriate degree because there was not enough coverage of specialized subjects. In consequence, a new agreement was worked out with George Washington University for a program leading to the degree of Master of Science in Administration (MSA). The program emphasized administration in areas concerned with national security. It required 36

## **History of the Industrial College of the Armed Forces**

### **Chapter VI**

credits for graduation - six more than before. Students could satisfy the requirements for this degree by completing one year at the Industrial College, followed by a six-week supplementary course at George Washington University. The new program was focused on instruction designed to be helpful to defense managers rather than on management in the civilian sector.

Except for the updating of course materials, few changes were made in the 1973 - 1974 Resident program. One of the three Foundation courses, Scientific Decision-making, was revised in response to student criticisms that it was too academic and theoretical. With the assistance of Professor Paul Vatter of the Harvard School of Business Administration the course was restructured to emphasize practical quantitative analysis problems and the use of case studies with computer support provided by remote terminals.

The Research program, as before, encouraged students to work on problems that were of current interest to the Department of Defense. In all, 77 student papers were forwarded to Government agencies. Also in the 1973 - 1974 academic year, four members of the Class of 1973 who had received research fellowships completed their projects. No appointments to such fellowships were made from the Class of 1974 due to a lack of interest.

Case studies were used extensively in the 1973 - 1974 academic program. In that year, 31 cases were studied, including 10 in the Core program. By this time the use of cases had become a traditional and favorite methodology. Associated with this development was the continuing and intensive search for materials. When they were first employed, the College had to purchase them or contract for their preparation. More and more the College developed its own cases and revised those obtained from other sources. In 1973 - 1974 half of the cases used had been prepared in-house. The effectiveness of case studies used in the classrooms depended to a large extent on the skill of the instructor. In order to develop such skills the College every summer conducted a faculty training program in case study discussion techniques.

#### **3. A Transitional Year, 1974 - 1975**

On several occasions in its long history the Industrial College made basic changes in the way it was organized. One such change was made by the Commandant, Lieutenant General Walter J. Woolwine, USA, who wanted a simplified organization that would bring the Commandant closer to the classroom.

## **History of the Industrial College of the Armed Forces Chapter VI**

The Industrial College was reorganized on 1 July 1974. The Resident School was then replaced by four "teaching" departments:

- The Department of Political and Social Studies
- The Department of Resources Management Studies
- The Department of Economic Studies
- The Department of National Security Management Studies

A fifth department, "Simulations and Computer Support," took the place of the Simulation and Computer Support Directorate. Curriculum planning was performed by the Department of Curriculum Development and Research as the successor of the former Academic Plans and Research Directorate.

General Woolwine assigned to the Deputy Commandant the role of Dean of Students. At the same time, the title of Senior Educational Advisor was replaced by that of Dean of Academics and the College Secretary received the new title of Dean of Administration. Finally, the two extension programs were consolidated under a new Department of Non-resident Instruction. The result of these changes was a new organizational charter that was very different from those for previous years. With all these changes, however, there was very little change in what was taught at the Industrial College and in how it was taught.

The principal change in the 1974 - 1975 curriculum was the consolidation of the seven Core courses into five courses. At the same time, the workshops were no longer offered separately, but were absorbed into the Electives program. In that program, three courses in computer application were again listed, but at different levels of sophistication. The 43 elective courses were the most that were ever included in that program. The list included three National War College courses open to ICAF students. Four of the Industrial College elective courses were also open to National War College students.

The Research program in 1974 - 1975 again offered a choice of selecting either a major or a limited research project. As before, the limited research option was the most popular; it was the choice of 114 of the 180 students. Twenty-one papers were rated as outstanding, and 68 were distributed to Federal agencies and offices outside of the Industrial College.

The top leadership of the Industrial College underwent an almost complete change in 1975. General Woolwine retired on 31 May 1975, near the end of his second year as Commandant. The Deputy Commandant, Major General Edward A.

## History of the Industrial College of the Armed Forces

### Chapter VI

McGough III, USAF, served as Acting Commandant until he, too, retired on 31 July 1975. The next Commandant, Major General Theodore Antonelli, USA, on his appointment in July 1975 was soon involved in the consolidation issue and the events leading to the establishment of the National Defense University.

A major event in the history of the Industrial College was the retirement in 1975 of the Senior Educational Advisor, Dr. Marlin S. Reichley. During his thirty years of service, Dr. Reichley had a profound influence on the development of the College. He was always the highest ranking civilian staff member and usually was an advisor to the Commandant. He served in various capacities - as Director of Instruction; Director of Instruction/Senior Educational Advisor; Director of the Resident School; and finally, as Senior Educational Advisor. He was also the only civilian employee who attained a super-grade (GS-16). Through his long tenure he helped to provide continuity to the development of the Industrial College.

#### D. Extension Programs

##### 1. The National Security Seminars

The Seminar program was conducted at a somewhat reduced level during the 1967 - 1975 period. Attendance was held back by the limited number of Reserve Officers that the Military Services could assign to the seminars because of fiscal constraints. In 1967 - 1968 a six-officer team conducted a two-week program of 32 lectures in seven cities in addition to the usual "dress rehearsal" at the Industrial College. Attendance totalled only 3,801 persons and averaged 543 persons per seminar. The following year enrollments rose to 7,552 but only 3,008 of that number were recorded as having graduated. By Fiscal Year 1975 attendance had declined to a new low of 2,703 enrollees. Civilians in attendance ranged from a high of 1,509 in Fiscal Year 1970 to a low of 623 registrants in Fiscal Year 1975. Despite the decline in participation, the Seminars continued to be well-received wherever they were held.

As a result of feedback from conferees, the time allotted to audience participation was increased to 15 minutes for questions and answers after each lecture. More emphasis was given to presenting different viewpoints on controversial issues and more time was scheduled for panel discussions (a fourth hour of panel discussions was added in Fiscal Year 1974). The addition of a Foreign Service Officer to the Seminar Team in Fiscal Year 1970 facilitated the handling of questions relating to international relations. The Industrial College had asked the Department

## **History of the Industrial College of the Armed Forces**

### **Chapter VI**

of State to make available a Foreign Service Officer in order to increase the competence of the Seminar Team in the international aspects of national security issues. Although a review of the Seminar Program in 1972 resulted in slightly less emphasis on international relations and more stress on resources management, the specialized knowledge brought to the seminars by the Foreign Service Officer continued to be very helpful.

A question often asked was whether college credits should be granted for completing the Seminar course. An answer was provided by the decision of the University of Wisconsin in 1972 to grant two credit hours for the completion of an ICAF Seminar course. In 1973 - 1974 the University of California, Sacramento, also offered two credits for completion of the Seminar Course. The following year, colleges and universities in five of the seven cities on the itinerary granted credit hours for attendance at the Seminars. As many as 97 attendees were granted academic credits by Solano Community College at Vallejo, California.

Sacramento was also the scene of another event related to the Seminar program in 1974. Three members of the Seminar Team were invited by Governor Ronald Reagan to brief him and his senior staff on national and world security affairs.

The reduced scope of the Seminar Program did not mean that there was any reduction in its prestige. Each seminar was an important local event, and sponsors were always able to attract prominent speakers to address the enrollees. Speakers included U.S. Senators and Congressmen, the Assistant Secretary of the Army (Research and Development), the Deputy Assistant Secretary of Defense for Reserve Affairs, a Deputy Assistant Secretary of State, the National Commander of the American Legion, as well as other prominent personalities. In 1975, for example, keynote speakers included Senator Barry Goldwater of Arizona and Governor George Wallace of Alabama.

#### **2. The Correspondence Study Course**

The Correspondence Study Program underwent significant changes in the period 1967 - 1975. An all-time high of 9,366 enrollments were registered in Fiscal Year 1970. The major reason for rising enrollments was the phenomenal growth of the Reserve Officers Group Study Program begun in 1959. The following year, 6,054 students attended the 335 group study classes, as follows:

## History of the Industrial College of the Armed Forces

### Chapter VI

<u>Service</u>	<u>Classes</u>	<u>Students</u>
U.S. Army Reserve	188	4,404
Naval Reserve Officers School	28	375
Air Force Reserve Squadrons	119	1,275
Totals	335	6,054

When enrollments exceeded the 9,000 level in Fiscal Year 1970 the Industrial College became concerned over the strain on its resources resulting from such a high student load. A decision was then made to place a ceiling on the number of enrollments: 9,000 students was considered the maximum number that could be handled at any one time., Adherence to this objective was to be achieved through new, more stringent course eligibility requirements. The course was open to active duty officers of the rank of Lieutenant Colonel or Commander and above. However, Majors/Lieutenant Commanders could be accepted if they had a baccalaureate degree or had completed the Army Command and General Staff College Course or its equivalent. Finally, Army Captains and Navy Lieutenants could enroll if they had a baccalaureate degree and had completed the Army Command and General Staff College course. Similar standards governed the eligibility of Military Reserve Officers. Federal employees, GS-13 and higher were also eligible to take the course. These higher admission standards stabilized enrollments and also may have contributed to the higher levels of course completions. These new standards also slowed somewhat the growth of the group study programs.

For several years, the Correspondence Course enrolled a substantial number of Federal civilian employees and other civilians. In Fiscal Year 1969 a high of 2,681 civilians were enrolled in the course, only to be followed by a rapid decline in this category of students. By Fiscal Year 1975, only 335 civilians were enrolled in the course. Foreign student enrollments followed much the same pattern, declining from 595 students in Fiscal Year 1968 to 274 in Fiscal Year 1975.

An unforeseen development was the failure of the short course, Management in the Department of Defense, to attract many students. Initiated in 1967, the course had 1,449 enrollees in Fiscal Year 1969, but two years later, there were only 265 participants. The course was phased out in July 1971. An unstructured Selective Study Course introduced in 1967 also had a short life.

The growth of the Correspondence Course programs created a very heavy administrative workload. To meet this problem, emphasis was placed on using automated procedures as much as possible. This was necessary to avoid excessive

## History of the Industrial College of the Armed Forces

### Chapter VI

delays in handling applications, in administering and grading the tests and in handling the many routine tasks involved in what had become a very large operation. By Fiscal Year 1972 the automation of course administration was nearly completed but efforts continued to achieve even greater efficiency in the ensuing years.

Correspondence students frequently raised the question of whether the granting of college credits could be recommended for completion of the course. In response to these inquiries the Industrial College in the spring of 1974 requested the American Council on Education's Commission on Accreditation of Service Experience to assess the course and recommend standards for granting of undergraduate and graduate credits. Colleges and universities could use this guidance in determining whether or not they would grant credits for completion of the ICAF course.

The goal of producing the best possible textbooks for the Correspondence Course was always emphasized. Under the direction of Dr. Harry B. Yoshpe, who headed the Textbook Development Group until his retirement in June 1970, the textbook and monograph preparation plan was fully implemented. Soon, and without the benefit of publicity, an increasing number of requests for copies of individual textbooks and monographs were received - requests originating from Government agencies, educational institutions and from individuals. An unusually large transaction was the purchase of 30,000 copies of the textbook The National Security Structure by the Continental Army Command (CONARC) for use in the FY 1972 ROTC programs. The monographs prepared to supplement the textbook also played an increasingly important role.

The Industrial College was especially concerned with ways to support the growing officers' group study program. Instructor guides were often prepared by selected Reserve officers who were brought to the College for their annual two-week active duty training for that purpose. Supplementary materials, such as ICAF's Perspectives in Defense Management and other publications were furnished to the groups.

Two noteworthy events occurred during this period. On June 1, 1974, the Commandant awarded a certificate to the 50,000th graduate of the Correspondence Course - an Air National Guard Lieutenant Colonel. The previous year, cumulative enrollments since the inception of the program in 1950 passed the 100,000 figure. As Fiscal Year 1975 drew to a close, however, it was apparent that the period of rapid growth was over. Enrollment figures showed a steady decline from year to year. More important than this trend was the



## **History of the Industrial College of the Armed Forces**

### **Chapter VI**

reduction in disenrollment rates - a chronic problem. This rate had fallen to 23 percent in FY 1975, in sharp contrast to the usual level of about 40 percent that had prevailed for so many years. This improvement was attributed both to higher eligibility criteria and to emphasis on the timely submissions of lessons by the students.

#### **E. The Board of Advisors**

The Board of Advisors played a more restricted role after 1967 and its membership steadily declined. By 1971 its membership had declined to six persons. In his 1968 annual report to the Joint Chiefs of Staff, the Commandant, Lieutenant General Leighton I. Davis, USAF, limited his coverage of the Board to little more than listing its membership. Subsequent annual reports essentially followed this same pattern.

In 1971 the Chairman of the Board, in a letter to the Commandant, recommended that the Board play an increasingly vital role in future years. Steps were also taken to expand the membership in 1972. In the period 1972 to 1975 the Board had 12 members. During those years it made no major recommendations, and in academic year 1974 - 1975 the Board did not meet.

## History of the Industrial College of the Armed Forces

### Chapter VII

#### VII. ICAF AS A COMPONENT OF THE DEFENSE UNIVERSITY

##### A. The Consolidation Issue

Proposals to consolidate the National War College and the Industrial College of the Armed Forces have a long history. The Department of Defense questioned the separate existence of two senior joint military colleges at Fort McNair. From time to time the Department expressed these concerns to the Joint Chiefs of Staff who had a statutory responsibility to "formulate policies for coordinating the military education of the members of the Armed Forces."<sup>1</sup>

In June 1949 the Secretary of Defense expressed to the Joint Chiefs of Staff his desire for the development of a closer relationship between the National War College and the Industrial College. The following month the Munitions Board recommended bringing the two colleges together in a "National Security University" - a concept that was supported by the Joint Chiefs of Staff.

After exploring this proposal, however, the Joint Chiefs saw no advantages in a merger of the two institutions and they expressed their concern that such an action would actually result in higher costs. The idea of a merger was raised again from time to time only to be rejected as not offering any substantial economies and as possibly detrimental to senior-level officer education. As previously noted, the Baxter Board in its 1954 report expressed the fear that consolidation might "dull the cutting edge with which the separate institutions hold to the line of their respective roles and missions." The usual rationale for consolidation<sup>2</sup> was based on economics and not on educational advantages.

<sup>1</sup> U.S. Code, Title 10, Armed Forces Section 141 (d)(6); similar responsibility was assigned by DOD Directive 5100.1, dated 31 December 1958.

<sup>2</sup> Report by the J-1 to the Joint Chiefs of Staff on Consolidation of Senior Joint Colleges, 27 August 1974, JCS 2484/85.

## History of the Industrial College of the Armed Forces Chapter VII

The Joint Chiefs of Staff generally opposed a consolidation of the two colleges that would result in a merger of their curriculums. For example, on 28 December 1955 the Joint Chiefs advised the Secretary of Defense that merging the curriculums of the National War College and the Industrial College "would adversely affect the accomplishment of their separate but essential missions by decreasing the areas studied and the depth of study in the particular fields of the two colleges." The net result would be "a decrease in the contribution of each to national security." On the other hand, the Joint Chiefs of Staff believed that substantial savings were attainable by combining the administrative and support functions of the two institutions.

In 1959 the Secretary of Defense suggested that the National War College, the Industrial College of the Armed Forces, and the Armed Forces Staff College be brought together under one command in a university structure. The Joint Chiefs responded that such a step was not necessary for developing a coordinated education program. This was true because the Joint Chiefs of Staff provide "single direction" of the three colleges. Each of these colleges required a different curriculum in order to carry out its mission.

Several developments in the 1970's rekindled interest in the consolidation issue. In April 1973 representatives of the Military Personnel Subcommittee of the House Armed Services Committee visited the National War College and the Industrial College. Their main concern was to find ways to cut costs. Meanwhile, continuing concern over austere defense budgets led the Department of Defense to undertake a major study of the consolidation issue. As a part of an examination of the Senior Joint Colleges, a comprehensive study of the consolidation issue was undertaken by the J-1 Personnel Directorate of the Joint Chiefs of Staff. Their draft paper, JCS 2484/85, became the focus for protracted discussions and debates of the consolidation issue in 1974 and 1975.

The outcome of these discussions was a compromise solution which preserved the separate existence of the National War College and the Industrial College of the Armed

3 Enclosure B, Additional Facts Bearing on the Problem, Report by the J-1 to the Joint Chiefs of Staff on Consolidation of Senior Joint Colleges, 27 August 1974, JCS 2484/85. Enclosure B provides a detailed historical background of this issue.

## History of the Industrial College of the Armed Forces

### Chapter VII

Forces in a new university structure. This represented a minimum application of the consolidation concepts.

In the long exchange of views over the inter-relationships of the Joint Senior Military Colleges, the Industrial College, and the National War College emphasized the importance of their separate existence. Meanwhile, both colleges promoted their cooperation by such measures as planning joint lectures and opening their elective courses to students of both institutions.

The initial JCS arguments for the consolidation of the Senior Joint Colleges (JCS 2484/85) were firmly opposed by both the National War College and the Industrial College. The NWC Commandant, Vice Admiral M.G. Bayne, in a 10 September 1974 Memorandum for the Director, Joint Staff emphasized that the JCS plan "does not make a compelling case for consolidation either on financial or educational grounds." Similar arguments were advanced by the ICAF Commandant, General Woolwine in his memorandum sent to the Director, Joint Chiefs of Staff, sent on the next day. General Woolwine concluded that the entire JCS argument for consolidation "appears to be based on economics with little regard for the quality of the graduate." The Industrial College had a unique educational role, General Woolwine continued: "Of the five Senior Service Schools, only ICAF concentrates on management of resources: men, money and material. ...The proposal to combine the two Colleges and to reduce ICAF to a subordinate department of a new War College will not provide the emphasis and the strength of the current organization." He challenged the assumption that significant personnel and monetary savings would result from consolidation. Modifications in the JCS plan for "consolidation of Senior Joint Colleges" in response to the staffing of the plan still did not satisfy General Woolwine. On 30 October 1974 he informed the Director, J-1 that the emphases in JCS 2484/85 still was "primarily on economics rather than on the quality of education provided our military officers and civilian government officials. I do not believe the 'cost effectiveness' of education can be measured in precise terms. Senior Service Colleges education insures that our graduates

- 4 Plan for Establishment of the National Defense University, Fort Lesley J. McNair, Washington, D.C. November 1975.
- 5 Memorandum, Commandant, Industrial College of the Armed Forces for Chairman Joint Chiefs of Staff, 10 September 1974, sub: Coordination/consolidation efforts conducted at the Senior Joint Colleges.

## History of the Industrial College of the Armed Forces

### Chapter VII

do a better job of managing scarce resources." General Woolwine explained that if the National War College and the Industrial College had intensified their efforts to achieve economies where possible without detracting from the educational effectiveness of each of the two colleges. <sup>6</sup>

The exchange of views, between the Joint Chiefs and the two Colleges helped to clarify the consolidation issue. The National War College and the Industrial College would strongly defend the continuation of their separate existence. On the other hand, both colleges realized that it would be hard to avoid some form of consolidation. If such was the case, whatever plan of consolidation was devised should be acceptable to the Industrial College and the National War College. The Joint Chiefs of Staff, in turn, became more receptive to the views of the two colleges. These views were a factor in the broader examination of the consolidation issue by the Committee on Excellence in Education established by the Department of Defense.

#### B. Relations with the Committee on Excellence in Education

The consolidation issue in 1974 became a part of the comprehensive study of professional education in the Department of Defense undertaken by the Committee on Excellence in Education. This committee was established in 1974 by the Department of Defense in response to inquiries by congressional committees and their staffs as well as by senior officials within the Defense Establishment. The committee was chaired by Deputy Secretary of Defense William P. Clements, Jr. and had as members, the three Service Secretaries and the Assistant Secretary of Defense for Manpower and Reserve Affairs.

On August 8, 1974, the Deputy Secretary informed the Chairman of the Joint Chiefs of Staff that the Committee on Excellence in education was beginning to focus attention on the Senior Service Colleges. For that reason he requested information on a study being conducted by the staffs of the National War College and the Industrial College on the feasibility of consolidating the two colleges. He observed that "the prospect of consolidating the two institutions located at Ft. McNair is of obvious interest to the Committee in its deliberations." The Deputy Secretary

<sup>6</sup> Memorandum, Commandant, Industrial College of the Armed Forces for Director, J-1, 30 October 1974, sub: Consolidation of Senior Joint Colleges.

## History of the Industrial College of the Armed Forces

### Chapter VII

apparently had not been informed that the study he referred to was merely an effort by the two colleges to determine the possibility of more effective coordination of the activities of the two institutions and the use of their facilities - consolidation was not being studied. However, there was no doubt that the committee headed by Deputy Secretary Clements was very interested in the consolidation issue.

The Committee visited the Service academies, the intermediate staff colleges, the Naval and Air Force post-graduate schools and the five senior defense colleges, including the Industrial College and the National War College. On each visit to a senior college it paid particular attention to the elusive but fundamental issue of the benefits obtained from that college by individual officers, by the Services, and by the Department of Defense. After each visit the Committee recorded its impressions in a memorandum for the record which set forth the actions which it believed ought to be taken by that school. The Committee decided not to publish a narrative study or comprehensive final report. This made each memorandum for the record all the more important.

The Committee was briefed by the Commandant during its visit to the Industrial College on January 22, 1975. In outlining the development of the Industrial College, General Woolwine explained how the curriculum evolved from a narrow focus on mobilization planning in the 1920's to the consideration in the 1950s of such subjects as reconstruction after a nuclear attack. In the ensuing years it developed the modern curriculum which addressed national security in terms of resources management in the broadest sense.

During the briefing it became evident that two members of the Committee found it difficult to understand what the Industrial College was all about. Apparently some of the members expected to find a literal and narrow interpretation of the ICAF charter. The name "Industrial College" also appeared to convey a wrong impression. In order to correct such views, the Committee was briefed on how the ICAF mission had been broadened to meet changing national security requirements. The ICAF curriculum was designed to

7 Memorandum, Deputy Secretary of Defense for the Chairman, Joint Chiefs of Staff, 8 August 1974, sub: Study of Consolidation of the National War College and the Industrial College of the Armed Forces.

## History of the Industrial College of the Armed Forces

### Chapter VII

provide instruction in concepts of resources management and decision-making that could be applied across the broad spectrum of assignments rather than simply to prepare an officer for a specific desk at the Pentagon on his next assignment.

In a subsequent briefing of the Joint Chiefs of Staff on the Committee's visit, General Woolwine observed that "I believe the committee overlooked the time devoted to the study of resource management ...I think the Committee fully expected to see our entire curriculum devoted to a study of industry and the procurement process in the DOD. They in fact admitted that the name of the College had given them that impression." The Commandant explained to the Joint Chiefs that most top positions in the Defense Establishment required knowledge of resource management in its broadest context. To narrow the scope of the curriculum as the Committee appeared to desire would put the Industrial College "in the category of a super trade-school." He emphasized that contrary to the Memorandum for the Record which the Committee prepared following its visit, "the Industrial College believes it should emphasize concepts and approaches to national security decision-making rather than specifics which quickly change and become outdated." The Industrial College was trying to teach principles that can be applied in a variety of situations. "We are educating officers for the remainder of their service careers - not training them for their job," the Commandant emphasized. He concluded by warning that the implications of the Committee's Memorandum for the Record, if followed, would raise the question of continuing the Industrial College as a Joint Senior Service College.

The Committee issued a comprehensive Memorandum for the Chairman, Joint Chiefs of Staff on 5 June 1975. Entitled "The Senior Service Colleges: Conclusions and Initiatives," this memorandum presented the principle findings of the Committee and its decisions as to actions to be taken.

The memorandum noted that a basic argument for consolidation was that many of the same subjects were included in the curriculum of all five Senior Colleges. This raised the question of whether there really was any fundamental differences among them. Another argument for consolidation was that the Colleges "do not represent a level of sophistication, authority and recognized expertise which substantiates a separate and discrete identity to each College." Such arguments did not convince the Committee that consolidation was called for. Instead, the Committee concluded that each school should increase its effectiveness by sharpening its focus on its mission field.

## History of the Industrial College of the Armed Forces

### Chapter VII

The Committee was especially concerned that common core programs of the five Senior Service Colleges covered much the same ground. Since each college developed its own common core programs, these programs differed in their effectiveness and their perceptions of the basic education and needs of their students. What was needed was a collective effort on the part of the five colleges to build an outstanding core program addressing these common needs and taught at each of the five schools.

The Committee mandated a common core curriculum for the Senior Services Colleges beginning in the next academic year. The President of the Naval War College was assigned the task of coordinating the preparation of this curriculum. It was anticipated that the common core would constitute about a third of each school's curriculum. In other actions, the Committee called for a sharpening of focus and a renewal of emphasis on primary mission fields. Elective programs should be closely related to those missions. Faculty research should be upgraded in order to develop real expertise in the respective mission fields. With regard to field trips, the Committee concluded that they "do not provide sufficient educational return to justify continued funding by the Department of Defense." Short, mission-related trips, however, were highly desirable. Misgivings were also expressed concerning the feasibility of the cooperative degree programs.

The Committee on Excellence in Education's views were seriously considered by the Industrial College in developing its curriculum. The greatest impact of the Committee, however, was its support of the consolidation of the National War College and the Industrial College by the Department of Defense.

#### C. Establishment of the National Defense University

The Industrial College and the National War College were directly affected by a brief section in the Clements Committee memorandum of 5 June 1975 entitled "A Proposal: The University of National Defense." The section stated that the National War College and the Industrial College of the Armed Forces "should continue to be colleges in their own right but should be brought together in the form of a university as soon as possible." The Committee mandated the Chairman, Joint Chiefs of Staff and the President (designate) of the new university to develop plans for consolidation and present them to the Committee by 12 December 1975.

This mandate led to a series of actions that resulted in the establishing of the National Defense University. On



## History of the Industrial College of the Armed Forces

### Chapter VII

29 July 1975, the Commandant of the National War College, Vice Admiral M. G. Bayne was designated as the President, National Defense University, by the Secretary of Defense with the approval of President Ford. On 6 August the Chairman, Joint Chiefs of Staff, directed him to prepare a plan for consolidating the two colleges in a university structure and to draft a charter for the new institution. With the establishing of the Office of the President in the ICAF building and the creation of a University Planning Staff early in August, this task was begun in earnest. By an early decision the title of National Defense University was adopted for the new institution. The Senior Service Colleges were linked with this planning by naming the President of the National Defense University as Permanent Chairman of the Military Education Coordinating Committee which included the heads of the five colleges.

The Planning Staff thoroughly studied the two colleges - their functions, organization, costs and personnel. It was assisted by both Commandants as well as by the faculties and staffs of the two institutions and by the advice and counsel of the Boards of Consultants and Advisors of the Colleges. At the same time, a special Army Manpower Management Team conducted an independent examination of the Colleges. The findings of both surveys were carefully studied as a basis for planning. The University Concept that emerged from this planning<sup>8</sup> would maintain the identity and mission of each college.

It provided for a small Office of the President for Policy Guidance and Administration. Nonresident activities and any common central or readily combinable administrative support elements would be moved to the university level. These activities would be grouped into four directorates.

External Programs, such as NWC's Defense Strategy Seminar and ICAF's National Security Seminars.

Research, which would build on NWC's Strategic Research Group.

Management Systems, which would make ICAF's computer capabilities available to both colleges.

Administrative and Budget Directorate - a consolidation of support functions, including the libraries.

8 "Plan for Establishment of the National Defense University," Fort Lesley J. McNair, Washington, D.C., November 1975.

## History of the Industrial College of the Armed Forces

### Chapter VII

Admiral Bayne later observed that the greatest difficulties encountered by the planners was in deciding what to combine and still maintain the separate identity of the two colleges. The final plan reflects the effort to assign to the University only non-teaching functions - a standard that was hard to apply.

As envisioned by the planners the University would enable the two Commandants to concentrate on the missions of their Colleges, on the building of their curriculums and on faculty development. Each college would need only a small support element.

The planners anticipated that the University would provide a number of other advantages. It would provide more educational opportunities for students by opening up to them the resources of both colleges. Academic and support facilities could be used more efficiently. The planners also believed that enrollment at the University could be increased by about forty students with no increase in faculty or administrative support. These and other advantages from adoption of the University concept were expected to generate substantial savings. The establishment of the University was also expected to assist the Joint Chief of Staff in their development of policies for senior professional military education.

A significant feature of the plan was the provision for maintaining a direct relationship between the President of the University and Commandants of the two colleges. This arrangement was central to the operations of the University.

An implied advantage of consolidation was the prestige associated with the designation of "University." This is the kind of advantage that can not be quantified, yet it can be very real and important. For the Industrial College its new role as a component of the University might well reduce the concern frequently expressed over the word "Industrial" in its name. After all, it would now have university status.

The draft plan for the establishing of the National Defense University was explained by Admiral Bayne at a meeting of the Senior Service College Commandants and the Committee on Excellence in Education on 25 November 1975. The plan was well received although concern was expressed over the inclusion of instruction in international affairs in the ICAF curriculum - instruction that could be provided to ICAF students by the National War College. The most troublesome issue - one that was not settled - was whether the Defense Systems Management School (DSMS) should be

## History of the Industrial College of the Armed Forces

### Chapter VII

included in the University structure. Deputy Secretary Clements favored such a move. He instructed Admiral Bayne to prepare a report on the relationship of the Industrial College to the Defense System Management School.

Deputy Secretary Clements emphasized that the new University structure had to offer real advantages. He cautioned that "we cannot allow the final result to be merely the addition of another administrative layer on top of ICAF and NWC." The meeting of 25 November 1975 cleared the way for the establishing of the National Defense University. Two weeks later the plan for establishing the University was forwarded<sup>10</sup> by the Joint Chiefs of Staff to the Secretary of Defense.

The Committee on Excellence in Education approved the plan for the establishment of the National Defense University on 16 January 1976 and designated that date as the official date for the formal establishment of the University. The committee requested the President, National Defense University, to implement the "Plan for the Establishment of the NDU (JCS-248.4/96-5)." He was also directed to submit to the Joint Chiefs of Staff by 15 March 1976 a report on the relationship between the Industrial<sup>11</sup> College and the Defense Systems Management School.

The plan included a charter for the new institution and revised charters for the two colleges together with statements of mission and scope.

The JCS-approved plan for the National Defense University provided the Industrial College with a new

<sup>9</sup> Memorandum for the Record, Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs (Major Henderson, USA), 8 January 1976, sub: Senior Service College Commandants Briefing of DOD, CEE, 28 November 1975.

<sup>10</sup> Memorandum (JCSM-428-75) by the Vice Director, Joint Staff to the Secretary of Defense, 9 December 1975.

<sup>11</sup> Memorandum, Chairman, JCS (General George S. Brown) for the President, National Defense University, 25 February 1976, sub: Committee on Excellence in Education Action on Senior Service Colleges.

## History of the Industrial College of the Armed Forces

### Chapter VII

charter - one that reaffirmed the College's traditional role. The charter designated the Industrial College of the Armed Forces as a major component of the National Defense University, and as "the only Senior Service College in the military educational system dedicated to the study of management of resources for national security." The College's mission was re-stated as follows:

"To conduct senior level courses of study and associated research in the management of resources in the interest of national security in order to enhance the preparation of selected military officers and senior career civilian officials for positions of high trust in the Federal Government."

This mission statement called for no significant changes. In fact, it was essentially a reaffirmation of ICAF's own interpretation of its mission. The explicit mention of "associated research", while new, merely recognized a long-standing feature of the curriculum.

Under the heading of "Scope" the new charter refined and updated the list of subject areas to be covered in the curriculum - subjects that antedated even the 1962 charter. The new list included the study of the following broad areas as they related to national security:

a. Human, natural, and industrial resources and the impact of military, economic, political, scientific, social, and technological developments.

b. Contemporary institutions, processes and techniques of management.

c. The American economy and its management.

d. Comparative economic capabilities and potential of other major nations and regions.

e. Department of Defense operations and management, particularly the procurement and distribution of material and the management of manpower.

f. Emergency and industrial preparedness and mobilization potential.

The charter also called for basic studies in economic theory, management theory and practice, analytic decision-making and computer systems. These subjects were well established in the curriculum for many years, but this was their first recognition in the ICAF charter as major study areas.

## **History of the Industrial College of the Armed Forces**

### **Chapter VII**

Finally, the new charter provided for a broad orientation in the national and international environment of national security policy formulation - a subject area usually presented in an introductory unit in the curriculum.

The new charter of the Industrial College made no mention of the National Security Seminars. The termination of this program which had extended the essence of the ICAF curriculum to a nationwide constituency was a natural consequence of the establishing of the National Defense University. In assuming the responsibility for developing a replacement program the University could build on the foundation developed by the Industrial College and rely on the resources of both Colleges. As for the Correspondence Course Program, it was not shifted to the University until 1 January 1977 when it became a part of the University's External Programs Directorate.

In a brief section on Personnel, the ICAF charter provided that the Commandant, ICAF, will be a nominative position, with a normal tour of three years. The faculty and staff were to be composed of approximately equal representation from the military departments plus required civilian associates.

The organizational structure of the industrial College established in response to its new charter showed few changes. An organizational chart for the Industrial College appears in "Implementation of the Plan for Establishment of the National Defense University" published in January 1976.

## History of the Industrial College of the Armed Forces. Chapter VIII

### VIII. THE INDUSTRIAL COLLEGE SINCE 1975

#### A. Accent on Mission, 1975 - 1976

The Industrial College carefully considered the views of the Committee on Excellence in Education and applied them in its program whenever they were practicable. A major concern of the Committee was the development of a Common Core Curriculum for the Senior Service Colleges that would cover subject matter that was essentially the same in all of the colleges. The Committee had estimated that such subjects constituted about a third of the curriculum of each college. The resulting Common Core Curriculum developed by the Senior Service Colleges in response to the Committee's mandate was sufficiently broad to enable each college to tailor its core program to its own requirements. This initiative by the Committee, consequently, had little effect on the Industrial College.

In his 1975 report to the Joint Chiefs of Staff, the Acting Commandant, Major General Edward A. McGough III, USAF anticipated that the evolution of the curriculum within the prescriptions of the Committee on Excellence in Education would be a process of refinements and a sharpening of focus rather than any substantial increase of emphasis. He cautioned that it would be a mistake for the Industrial College to do more by way of technical specialization. To do so would defeat the essential purpose of advanced professional education which is to place expertise in context and to temper it with perspective. Such an approach would best serve the educational needs of senior national security managers. General McGough also expressed serious doubts that elimination of the overseas field studies for budgetary reasons would really be cost effective since those trips were focused on comparative resources management.

The 1975 - 1976 curriculum reflected the impact of the views of the members of the Committee on Excellence in Education during their ICAF visit on 22 January 1975. The Committee questioned the time devoted to the Environment Unit since it covered an area closer to the mission of the National War College. More emphasis was desired on "mission specific" subjects even though the Industrial College had explained in its briefing of the Committee that 75 percent of its curriculum could be interpreted as meeting that

<sup>1</sup> Developments since 1976 are summarized in The National Defense University Report, 1976-1978, and reports of the National Defense University after 1978 submitted annually to the Joint Chiefs of Staff.

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

description. Nevertheless the College intensified its focus on the broad field of national security resources management and supporting subjects, including management, economics and analytic techniques. This was done by reducing the time assigned to environment studies and using the time gained for more instruction in resources management.

In the 1975 - 1976 curriculum the study of the domestic and international environment was condensed to five weeks. Resources management studies were expanded to constitute an estimated 81 percent of the curriculum. Another response to views of the Committee on Excellence in Education was the elimination of the traditional overseas field studies - an action viewed with regret by the students. The Industrial College had serious misgivings over both of these accommodations to the views of the Committee. In the next academic year, consequently, the environment studies were expanded and a program of limited overseas field trips was introduced. These trips were limited both geographically and in the number of student participants.

In order to condense the opening unit, the Environment of National Security, to five weeks, the course had to be completely restructured. The results were disappointing. The allotted time simply was not long enough to provide the students with a conceptual framework and overview of the entire year's program.

Another development in 1975 - 1976 was the integration of the so-called foundation courses - management, economics, and analytics into the electives program. Each student was permitted to make his own determination as to whether he had enough background so that he did not have to take courses in these subject areas. This policy of exempting students from such courses had been under way since 1973 due to the rising levels of educational background of the students.

The 1975 - 1976 curriculum devoted more time and gave more emphasis to the study of defense industries. More attention was also given to the availability of global resources and to such subject areas as the technological and resources problems that affected NATO. Little noticed at the time was the emphasis given to mobilization planning and industrial preparedness. These subjects which had played such a key role in the founding and the history of the Industrial College had been out of the limelight for a number of years. This situation was now changed. More and more attention was given to mobilization in the period 1977 - 1983.

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

The student research program continued to be a matter of concern. In his 1975 report to the Joint Chiefs of Staff, General McGough observed that the results of the popular "short paper option" were disappointing. He considered the quality of these papers as much too low. To meet this problem, General McGough proposed that this option be dropped in 1975 - 1976 and that each student be required to undertake a major research project culminating in a substantial written report. This change would sharply reduce the demand for elective courses. The problem that worried General McGough did not lend itself to an easy solution. Students were kept so busy by curriculum requirements that they had little time for a major research and writing project.

The Industrial College also participated in Department of Defense efforts to cut costs by voluntarily relinquishing 14 staff and faculty personnel spaces. This action was taken in anticipation of the shifting of most administrative functions to the new National Defense University. These economies were in addition to those resulting from the previous elimination of the Resident School in the reorganization of the College. The reduction in faculty spaces however came at a time when the student body was increased from the traditional 180 total to 198. This raised the question of whether the College could maintain the high quality of its instructional programs with fewer faculty resources to handle a heavier load.

#### **B. Administration and Organization**

The establishment of the National Defense University freed the Industrial College from most of its former administrative responsibilities. The Computer and Extension Programs were also shifted to the University along with other activities not directly associated with the educational program of the College. These developments streamlined the Industrial College and permitted it to devote full attention to the curriculum.

In its new status the Industrial College's relationship to the Joint Chiefs of Staff was also changed. Instead of reporting directly to the Joint Chiefs of Staff, the Commandants of the National War College and the Industrial College addressed their annual reports of operations to the President, National Defense University. This enabled the President of the University to promote closer relationships between the two colleges and to participate in the development of their educational programs.



## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

Beginning in 1975, the Commandant of the Industrial College of the Armed Forces was a two-star officer. In fact, the prospect of the elimination of one Lieutenant General slot was an important factor in the events leading to the consolidation of the National War College and the Industrial College. One development after 1977 was the short tenure of the successive ICAF Commandants. This situation worried the President of the National Defense University, Lt. General Robert G. Gard Jr. In his final report to the Joint Chiefs of Staff submitted in 1981, General Gard emphasized that stability in the position of Commandant was essential for real progress in curriculum development. He pointed out that in the four and a half years since he assumed the position of President, National Defense University, in February, 1977, the Industrial College had four commandants, and a fifth was scheduled to report in a few weeks. According to General Gard "This has proved highly disruptive to long range planning, regardless of the talents of the officers assigned to these positions." He recommended that officers assigned to the offices of University President and College Commandants be required to commit themselves to tours of three years or longer. If this was not feasible, General Gard said he would endorse the suggestion of the Board of Visitors that retired officers of outstanding credentials should be recalled for reasonable periods to provide essential stability and direction to these positions.

In January 1976 the Industrial College was headed by a Commandant of two-star rank who reported to the President of the newly-established National Defense University. He was advised on State Department and international relations by a senior Foreign Service Officer. A military Chief of Staff and Dean of Students coordinated academic and administrative programs with the staff and faculty and supervised student activities. In his office, a military Administrator headed a small Department of Academic Support responsible for such matters as clerical support, security, and protocol arrangements.

The academic program was conducted by four academic departments: Department of National Defense Environment Studies; Department of Resource Management Studies; Department of Economic Studies; Department of National Defense Management Studies.

A small central planning office, the Department of Curriculum Development and Research, was responsible for planning the curriculum, for developing educational policy, for program-oriented research and related matters. The Faculty Board comprising the department heads, the State Department Adviser, the Chief of Staff, the Administrator,

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

and chaired by the Commandant coordinated and directed the academic programs. Two other departments were transferred to the National Defense University in 1976. They were the Department of Simulations and Computer Support and the Department of Non-resident Instruction.

The next organizational changes were made in the Spring of 1978 in anticipation of curriculum revisions and to promote efficiency. The elimination of the Resident School office and staff and the position of Director, Resident School, in 1974 was designed to achieve economies and bring the Commandant closer to the classroom. These changes did not work out as well as anticipated. General Gard described the problem as "the fragmentation of the core program which resulted from decentralization of its preparation by separate academic departments."

To overcome this problem the position of Dean of Faculty and Academics with responsibility for developing and coordinating the academic programs was created in the Spring of 1978. At the same time, the Department of Curricular Development and Research was established. Initially the Office of the Dean consisted of the Director of Program Development and the Director of Program Implementation. The next year the two "Directors" were retitled as "Associate Deans" - another example of traditional preoccupation with semantics. In still another change of titles, the Office of the Dean of Faculty and Programs in 1980-1981 consisted of an Associate Dean of Faculty and Programs and an Assistant to the Dean for Mobilization Management. There was no assurance that these designations would not soon be changed again.

In order to provide more flexibility in teaching assignments and other matters related to the instructional program the faculty was loosely organized into four (later three) groups in 1978. These groups corresponded loosely to the chief divisions of the curriculum. Each group was headed by a senior military officer. In another 1978 organizational change the Chief of Staff position was redesignated as the Dean of Students and Administration. His office included a Director of Administrative Services and a Director of Academic Services. The latter was responsible for faculty development, advanced degree programs, coordinator of elective courses, student evaluation and ICAF participation in NDU non-resident programs.

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

#### **C. The Student Body**

The student body was substantially increased after 1975, largely for cost-effectiveness reasons. For the 1975-1976 academic year the student body total was raised from the usual 180 to 199, only to be raised again - to 218 for the class of 1977. This high level was maintained in subsequent years. An obvious problem was how to fit this enlarged student body into a building in which considerable space had already been preempted for NDU activities. As a result, the student study rooms changed from cozy to crowded.

An important characteristic of incoming students was the continuing high level of their educational backgrounds. The number of students with Ph.D degrees varied from eight in the class of 1976 to 17 in the class of 1977. Also impressive was the number of students who had masters degrees - their number ranging from 132 in 1976 to 155 in 1979. The high level of educational background of the incoming students had to be taken into account in shaping the ICAF educational programs. This factor also explains why it was so important to provide elective courses at different levels of sophistication.

Most military students at the time of their graduation were of the Lieutenant Colonel/Commander Rank. For example, in the class of 1977, 35 Army students were Lieutenant Colonels and 31 were Colonels; 47 Air Force Officers were Lieutnant Colonels and only 16 held the rank of Colonel; 22 Naval Officers were Commanders and 16 were Captains. The proportion of officers who were O5s tended to increase starting with the class of 1979. Thus, in the Class of 1980, 46 Army officers were O5s and only 24 were O6s. Comparable class of 1980 figures for the Navy were 25 and 9 and for the Air force 36 and 22.

The number of military students in the period starting in 1976-1977 was usually about 174 officers. During the same period, the number of Civilian Federal employees from the Department of Defense and other Federal agencies was 44 in most years. The largest number of Federal employees were at the GS 15/F.S. 03 level.

With regard to the age of the students when they reported to the College, the averages differed very little for the successive classes - usually ranging from age 42 to age 43. The age of the few Coast Guard students tended to be the highest. For example, the average for the two Coast Guard students in the class of 1981 was somewhat above age 44. For the other Services the lowest figure was that of the Air Force students in the class of 1978 - an average age

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

of 39.9 years. In subsequent years, the average age of Air Force students tended to be slightly lower than the averages for the other Services. Most Federal civilian employees in the student body were either age 42 or 43.

A recent issue is the question of whether the larger number of students admitted to the Industrial College would have an adverse effect on the quality of student personnel. So far there appears to be little cause for concern. Another question is that of how well the faculty and staff could handle the larger student body. Again it is too early to venture any meaningful judgements on this matter.

#### **D. Curriculum Development**

By 1975 the Industrial College had extensive experience in curriculum building. The processes involved in developing the curriculum required the balancing of a number of factors: the needs of the Department of Defense, changing perceptions of defense education, the wide diversity of student backgrounds and careers, and related considerations. The College had also developed ways to obtain information from students even before they arrive at Fort McNair - information on their educational backgrounds, their interests and career requirements. During their year at the College, students were asked to give their evaluations of lectures, classroom activities, and requirements of the curriculum. A standard device for gathering student information was the use of machine-processed data cards. In recent years, frequent use has been made of questionnaires submitted at the end of curriculum phases or segments of the phases. Thus a wealth of information is available for possible guidance in curriculum development. There was no easy way, however, to make effective use of such information. At times it was also necessary to decide how much weight to give to the critical judgements of students, especially where they were based on preconceived opinions or were subjective in nature.

The curriculum development process after 1975 was accompanied, as before, by changes in emphasis and in the order in which subjects were presented. Most notable was the use of new labels for segments of the curriculum. The major segments of the Core became "Phases" and their subdivisions were "Modules" each identified by a capital letter.

The Core program continued to consist of four major components until the 1980-1981 academic year when Phase V, Mobilization Planning and Management Field Studies, was added. During this period each Phase of the Core had, on

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

the average, four name changes, and the time allotted to each phase varied from year to year.

Changes in the title of Phase I resulted, in part, from uncertainties as how best to introduce the Core program. The traditional title of "Environment" was used until 1978-1979 when Phase I became "The Management Setting for Federal Executives." Its focus was on management in the public sector rather than on the private sector. From 1979 to 1981 Phase I was entitled as "The National Security Environment." It consisted initially of six modules extending over 14 weeks. The modules covered such broad areas as National Priorities, and Strategy and Policy Issues; Public Sector Management; Domestic and International Economic Policy; Regional Resources Studies; and Decision-making Skills and Analytic Tools. This list illustrates the broad range of subjects summarized in the introductory phase of the course which set the stage for the remainder of the curriculum.

In academic year 1980-1981, however, Phase I was preceded by a course in "Executive Assessment and Skills Development." The next year this subject area was included in a new Phase I entitled "Executive Development and Skills Assessment." As indicated by the title, the focus was on developing executive skills.

Phase II was initially entitled "Industry and Global Resources." In 1978-1979 the title was changed to "The Strategic Environment for Decision-making" only to be changed again to "Defense Materiel Management" in academic years 1979-1980 and 1980-1981. Finally, in 1982-1983 this phase was redesignated as "National Security and Mobilization Management." Major features of this Phase in 1977-1978 was a computer-assisted exercise in resource allocation and the introduction of the more complex MIT - Sloan Management Exercise. In 1980-81 students participated in a computer-assisted "Weapons Acquisition Simulation."

A reorientation of the curriculum began in 1979 to emphasize mobilization and industrial preparedness resulted in a new Phase II National Security and Mobilization Management. The first of its three modules studied national security and mobilization potential. The second module dealt with the international framework of U.S. national security. The final module focused on specific military strategy issues, including mobilization plans, structures and processes, the lessons of the past, current security threats and the ability of the United States to cope with them.

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

Phase III also underwent a number of changes after 1976. Initially it was a three-week study of Economic Policy and the World Economy. In 1978-1979 under the title of National Security Managerial Process, Phase III covered two broad areas: Manpower Management and Human Resources Management. After 1979 the title was simplified to Defense Manpower Management, and in 1982-86 to Manpower Resources Management. The wide range of subjects covered included Total Force Planning and the All-Volunteer Force Concept.

The ICAF curriculum always gave special attention to the last major segment, devoting as much as a third of the academic year to this phase. Until 1980-1981 Phase IV concluded the academic year. In the 1976-1978 academic years, Phase IV Management of the U.S. Defense Establishment, focused on Department of Defense management policies and philosophies; the DOD bureaucracy; systems for determining defense requirements; the allocation of defense resources; defense management problems and related topics. Phase IV also included two computer-assisted simulations, and in 1976-1977 a formal student debate on NATO Collaborative Weapons Development. This formidable list of subject areas illustrates why a lot of time had to be allotted to Phase IV.

A highlight of Phase IV was the annual Defense Options Analysis Study (DOAS). Students were organized into groups, each of which examined a defense management problem. The 1976-1977 curriculum also included a Final Synthesis consisting of a comparative analysis of selected areas of United States and Soviet Union military capabilities and potentials, using net assessment techniques.

The international field trips, suspended in 1975-1976 were revived the following year. They were designed to provide research in support of the DOAS and the Final Synthesis.

A new group research project was introduced in academic year 1977-1978 - the Defense Management Issue Analysis (DMIA). This was a three-phase problem-solving exercise that paralleled the other phases of the curriculum. The students were organized into 12 task groups each group examining a specific issue. This was entirely a student-operated undertaking. Members of each group organized their own program and faculty members remained in the background. At the conclusion of the program each group delivered oral reports to the entire student body.

In the 1979-1980 curriculum, Phase IV included a joint ICAF-NWC Strategy and Resources Exercise. The exercise was played by teams composed of ICAF and NWC students. The

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

following year, Phase IV was re-titled as "Defense Industrial Analysis" (DIA) and the phase was condensed to six weeks. The objective of the Defense Industrial Analysis, was to study the defense industrial base. The student body was organized into 14 task forces, each of which studied a specific defense industry case. Each task force prepared a written and oral report focusing on mobilization and surge issues. In preparing the 1982-1983 curriculum the planners bestowed the new title of "Industrial Resources Management" to this phase - again illustrating the tendency to make frequent semantic changes.

The new Phase V, Mobilization Planning and Management introduced by the 1980-1981 curriculum, devoted four of its eight weeks to mobilization issues. The last three weeks were devoted to a joint Strategy and Resources Exercise with the participation of the National War College. The following year, Phase V was retitled simply as "Joint Training Exercise."

It is safe to predict that traditional curriculum development processes will be continued for years to come. New titles will be adopted for essentially the same subject areas and relative emphases given to different phases of the curriculum will also change. Although basic methodologies may well be continued, they may be used in different ways. For the near future it appears that even greater emphasis will be placed on economic and industrial mobilization planning and problems.

#### **E. The Electives and Research Programs**

The option given to students of undertaking a major research project or instead, taking more elective courses resulted in a close linkage between the two programs. The logic supporting this policy as explained by the President of the University, Lieutenant General Robert G. Gard Jr, USA in his 1976-1978 report to the Joint Chiefs of Staff was that students with no background in thesis preparation would require an excessive amount of guidance if they were required to undertake a major research project and the educational benefits would be doubtful. It is possible, of course to contend that students do learn a lot from the experience of undertaking major research projects.

The electives program became the focus of increased attention following the decision in academic year 1975-1976 that students who so desired could take additional courses instead of undertaking a major research project. In exercising this option, a student had to take six semester-length courses that would include courses in management

## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

economics, analytical techniques and a short course in information systems management. This heavy requirement did not prevent the electives option from becoming very popular. For example, only 46 of the 199 students in the Class of 1976 chose a major research project, but only 15 members of the Class of 1980 made that choice. The 15 student included 5 who undertook projects as Associate Research Fellows under the auspices of the National Defense University. These five students were excused from all elective courses requirements.

As an incentive to induce more students to undertake research projects, the Industrial College instituted a policy of granting awards in recognition of outstanding research achievements. The new Commandant's Award for Excellence in Student Research was awarded to Lieutenant Colonel William L. Specuzza, USA, a member of the Class of 1980. In 1981, the new Chairman of the Joint Chiefs of Staff Award for Mobilization Research was granted to Colonel Edward V. Karl, USA and Lieutenant Colonel William Fedorochko Jr, USA for their study: A Contemporary Approach to Three Real World Problems: Near Term Readiness, Surge, and Mobilization. The same year, the Commandant's award for Excellence in Student Research was awarded to Mr. Roderick L. Vawter. Finally, the American Defense Preparedness Association Award for Excellence in Defense Mobilization Research was granted to Colonel Barry Meuse, USAF.

A new impetus for student research was provided by the emphasis on mobilization in 1980-1981. A Mobilization Studies Program was established as a major ICAF research effort. The objective was to study major problems and issues associated with the mobilization of resources during a war emergency and to recommend solutions. The students were assigned to research teams, with six to eight students and a faculty chairman on each team. The topics studied by each team were developed by the faculty. As an alternative to this program, students could choose to undertake an independent mobilization research project. Students who selected this alternative either conducted their projects individually or in groups of two or three members with the guidance of a faculty adviser.

#### **F. The Cooperative Degree Program**

The Industrial College - George Washington Cooperative Degree Program was still available but it attracted very few students. The long downward trend in this program appeared to end after 1976 when a slight increase took place. Enrollments ranged from 25 to 30 students a year. At any event, the Cooperative Degree Program had become a minor college activity.



## **History of the Industrial College of the Armed Forces.**

### **Chapter VIII**

#### **G. The New Board of Visitors**

Following the establishment of the National Defense University in January 1977 a Board of Visitors of 18 members was created for the new institution, with a subcommittee for each of the two component colleges. The subcommittees met separately, and they served as advisers to their respective Commandants. Plenary sessions were held occasionally to advise the President of the University. This structure was short-lived. In September 1977 the Deputy Assistant Secretary of Defense (Administration) directed that the Board of Visitors of the National Defense University and of the Defense Intelligence School be combined. This action was prompted by a Federal Government effort to reduce the numbers of advisory bodies.<sup>2</sup>

The new Board of Visitors was established in May 1978. It consisted of a National Defense University Panel of about 14 members and a Defense Intelligence School Panel of eight members. The President, National Defense University serves as executive agent for the Joint Chiefs of Staff in coordinating the advisory functions of the Board. This new arrangement appears to promote efficiency and economy, but will it be effective in performing advisory functions? Only time will tell. Advisory bodies for the Industrial College and the National War College earlier in their history played important roles in the development of their respective colleges. There is no doubt that such advisory support was a real asset.

#### **H. The Final Phase of ICAF's Extension Programs**

The Extension Programs developed by the Industrial College, as noted above, became a responsibility of the External Programs Directorate of the National Defense University. Academic year 1975-1976 was the last full year that ICAF conducted these programs.

The National Security Seminars were presented in seven cities in 1975-1976 (Lynchburg, Virginia; Tyler, Texas; Ashland, Oregon; Sheridan, Wyoming; Pensacola, Florida; Dayton, Ohio; and Orono, Maine). Abbreviated programs were also presented at the Industrial College and at the U.S. Marine Corps Amphibious Warfare School at Quantico, Virginia. Enrollments for that final year totalled 2,852 persons. Team members also present two lectures at industrial mobilization seminars conducted in various cities by the Department of Commerce.

<sup>2</sup> The National Defense University Report, 1976-1978, pp. g 1 and g 2.

**History of the Industrial College of the Armed Forces.**  
**Chapter VIII**

The National Security Management Correspondence Course had 4925 graduates in 1975-1976 (led, by the U.S. Air Force with 3,324 graduates). In that year, approximately 400 foreign nationals representing 31 countries were enrolled in the course, and 158 were graduated. The percent of course completions increased significantly, due in part to the higher eligibility requirements for enrollment. The 21 textbooks on which the course was based continued to be widely used, both in the Resident program of the Industrial College and in a number of other institutions. As noted earlier in this narrative the Seminar Program was shifted to the External Programs Directorate, National Defense University on 1 March 1976, and the Correspondence Course Program on 1 January 1977.

The Correspondence Course Program reached its 25th anniversary in 1975. During those 25 years it had enrolled more than 106,000 students, and graduated about 58,000 of that number. A review of the total participation figures for the Seminar and Correspondence Course Programs leads to the conclusion that through these activities a large number of persons had developed ties to the Industrial College.

# History of the Industrial College of the Armed Forces

## APPENDIX A

### DIRECTORS AND COMMANDANTS ARMY INDUSTRIAL COLLEGE

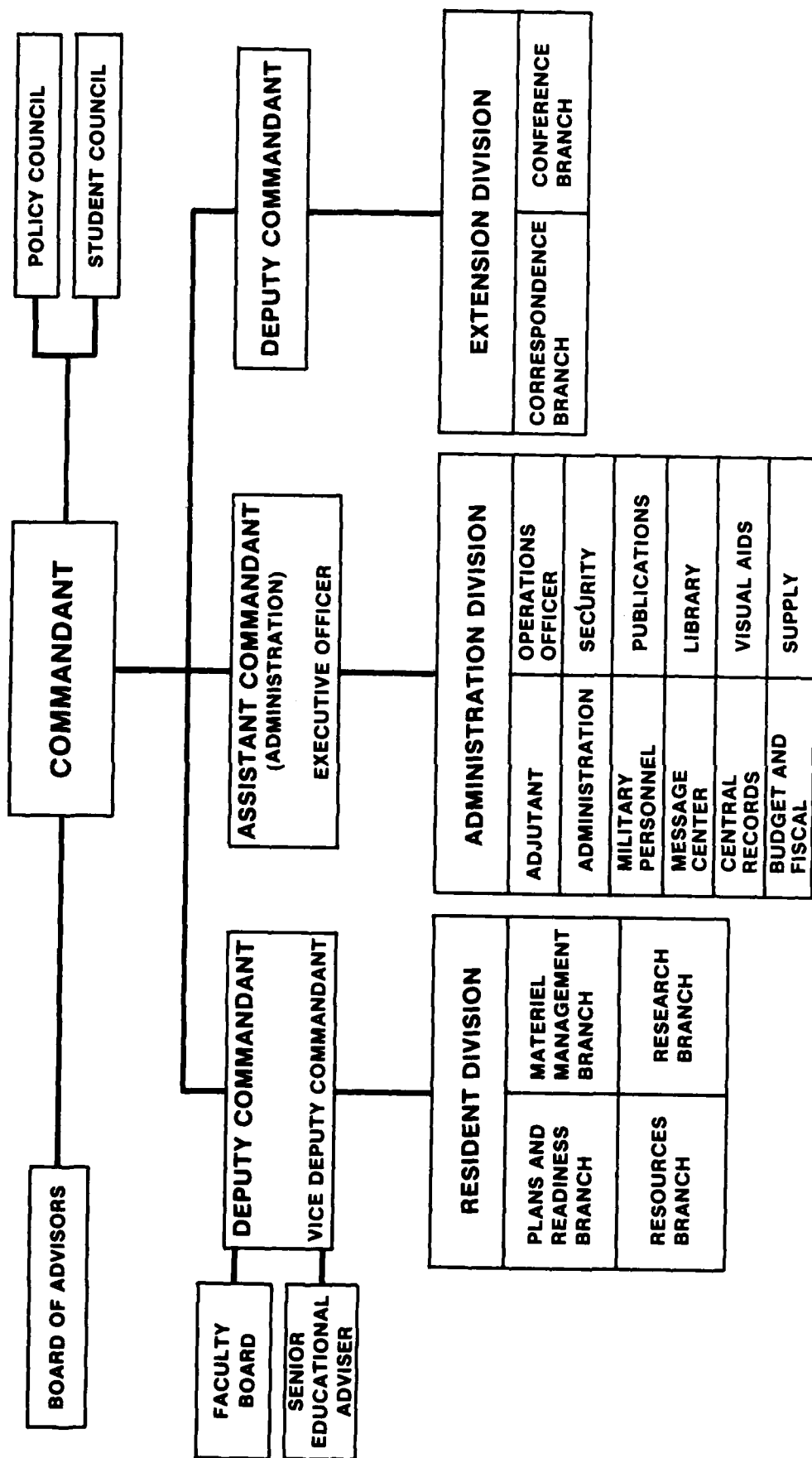
Colonel Harley B. Ferguson, CE	25 Feb 1924-12 Jan 1928
Colonel William P. Wooten, CE	12 Jan 1928-16 Nov 1929
Colonel Irvin J. Carr, SIG C	16 Nov 1929-31 Jul 1930
Colonel William A. McCain, QMC	31 Jul 1930-06 Jul 1934
Colonel Harry B. Jordan, ORD	06 Jul 1934-24 Aug 1938
Colonel Francis H. Miles, Jr., ORD	21 Aug 1938-16 Nov 1940
Lieutenant Colonel John E. Lewis, FA	16 Nov 1940-01 Feb 1941
Colonel Frank Whitehead, USMC	01 Feb 1941-23 Dec 1941
Colonel Francis H. Miles, Jr., ORD	15 Dec 1943-01 Sep 1944
Brigadier General Donald Armstrong, USA	01 Sep 1944-01 Jul 1946

### COMMANDANTS INDUSTRIAL COLLEGE OF THE ARMED FORCES

Brigadier General Edward B. McKinley, USA	01 Jul 1946-01 Apr 1948
Major General Arthur W. Vanaman, USAF	01 Apr 1948-23 May 1952
Rear Admiral Wesley McL. Hague, USN	18 Jun 1952-20 Jul 1955
Major General Robert P. Hollis, USA	20 Jul 1955-31 Oct 1957
Lieutenant General George W. Mundy, USA	01 Nov 1957-01 Jul 1961
Vice Admiral Rufus E. Rose, USN	01 Jul 1961-31 Mar 1964
Lieutenant General August Schomburg, USA	01 Apr 1964-30 Jun 1967
Lieutenant General Leighton I. Davis, USAF	01 Jul 1967-31 Jul 1968
Lieutenant General John S. Hardy, USAF	01 Aug 1968-31 Jul 1970
Vice Admiral J.V. Smith, USN	01 Aug 1970-31 Jul 1973
Lieutenant General Walter J. Woolwine, USA	01 Aug 1973-31 Mar 1975
Major General Edward A. McGough, III, USAF	01 Jun 1975-31 Jul 1975
Major General Theodore Antonelli, USA	Jul 1975 - Jul 1978
Major General James I. McInerney, Jr., USAF	Jul 1978 - Jan 1979
Major General John E. Ralph, USAF	Jan 1979 - Jun 1980
Major General James E. Dalton, USAF	Jul 1980 - Jun 1981
Rear Admiral Ronald E. Narmi, USN	Jun 1981 - Jul 1983

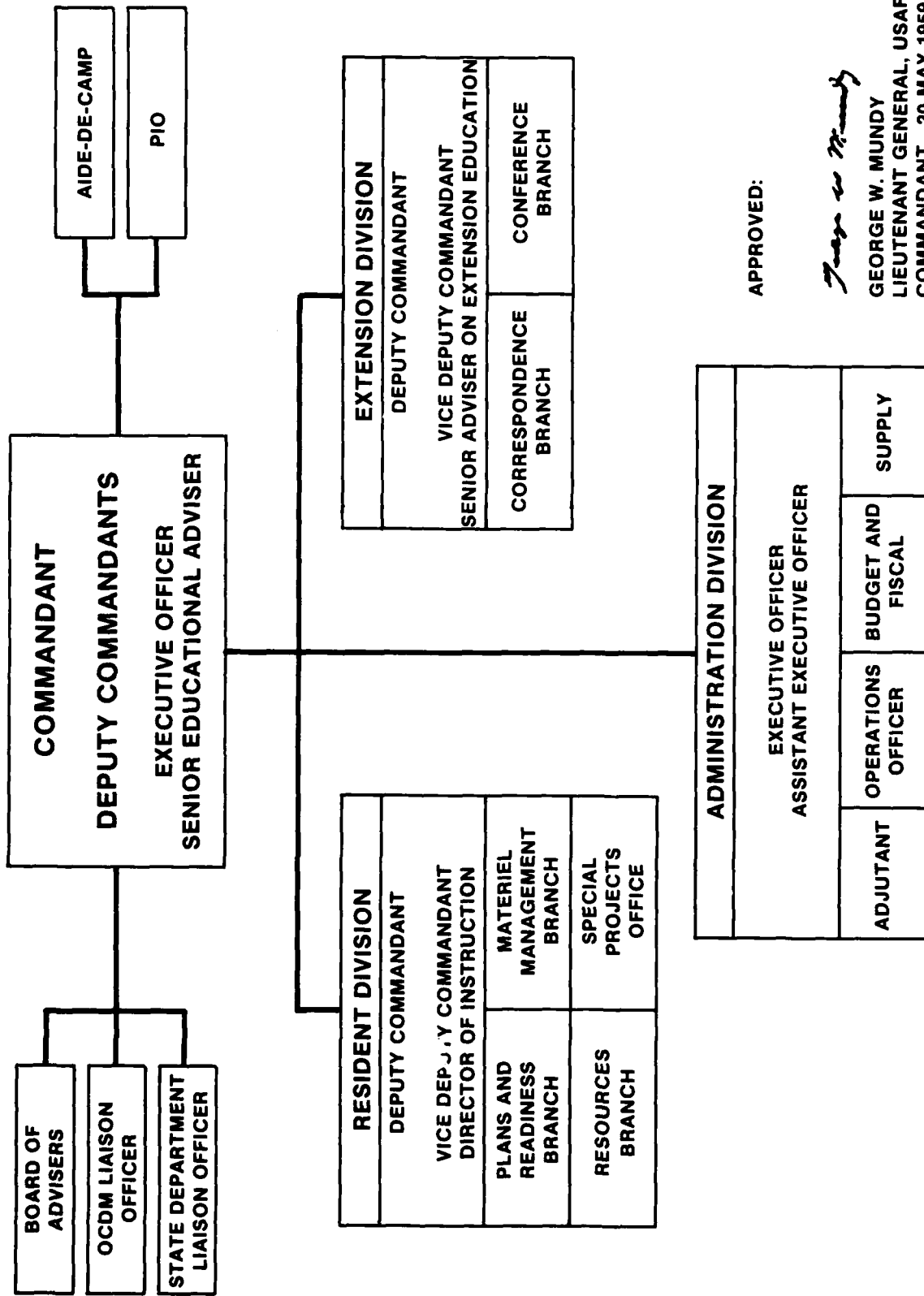
**History of the Industrial College of the Armed Forces**

**APPENDIX B**



ORGANIZATION OF THE INDUSTRIAL COLLEGE OF THE ARMED FORCES	
APPROVED: <i>R. P. Hollis</i> R. P. HOLLIS MAJOR GENERAL, USA COMMANDANT	1 JULY 1957

# INDUSTRIAL COLLEGE OF THE ARMED FORCES

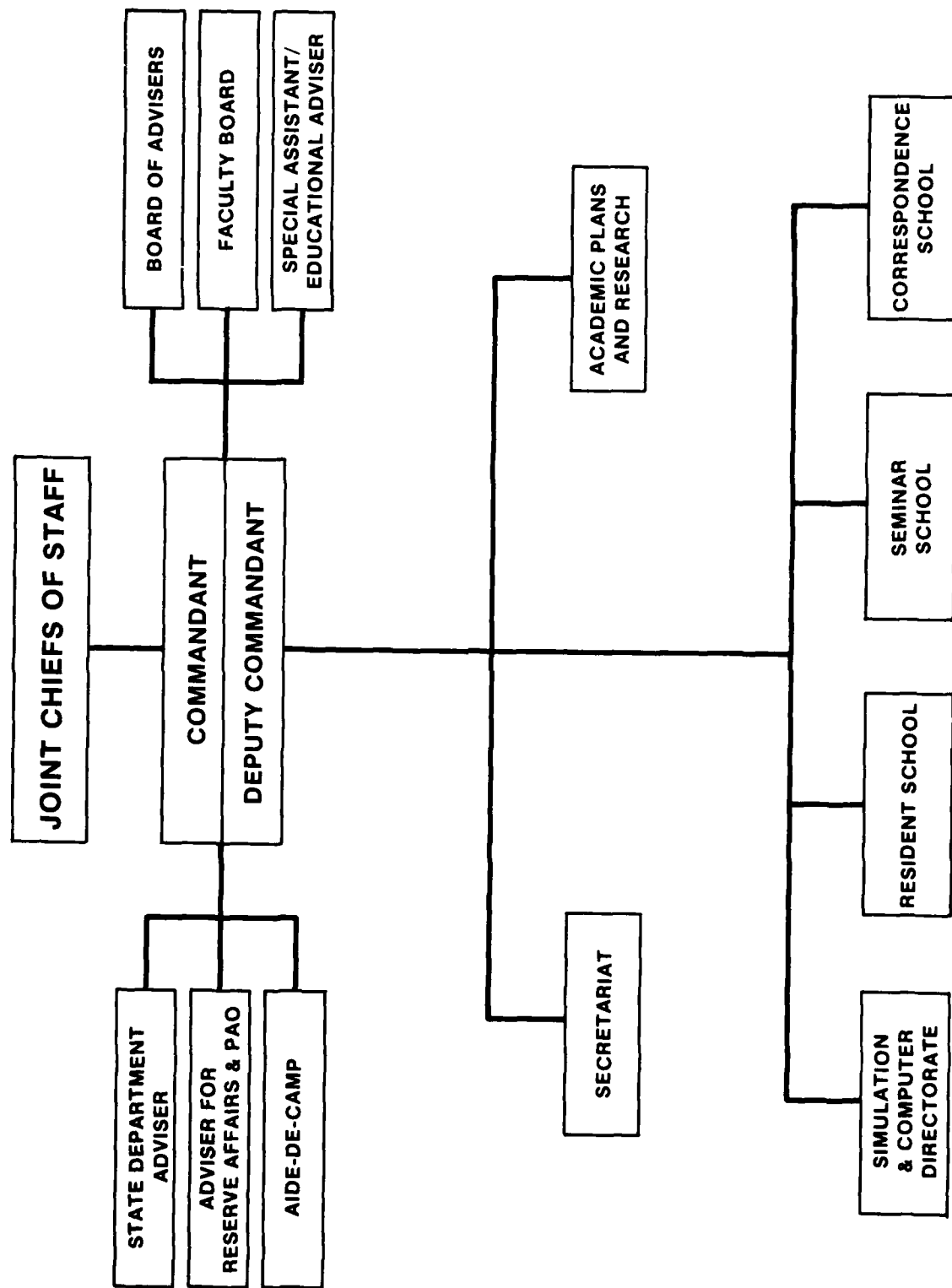


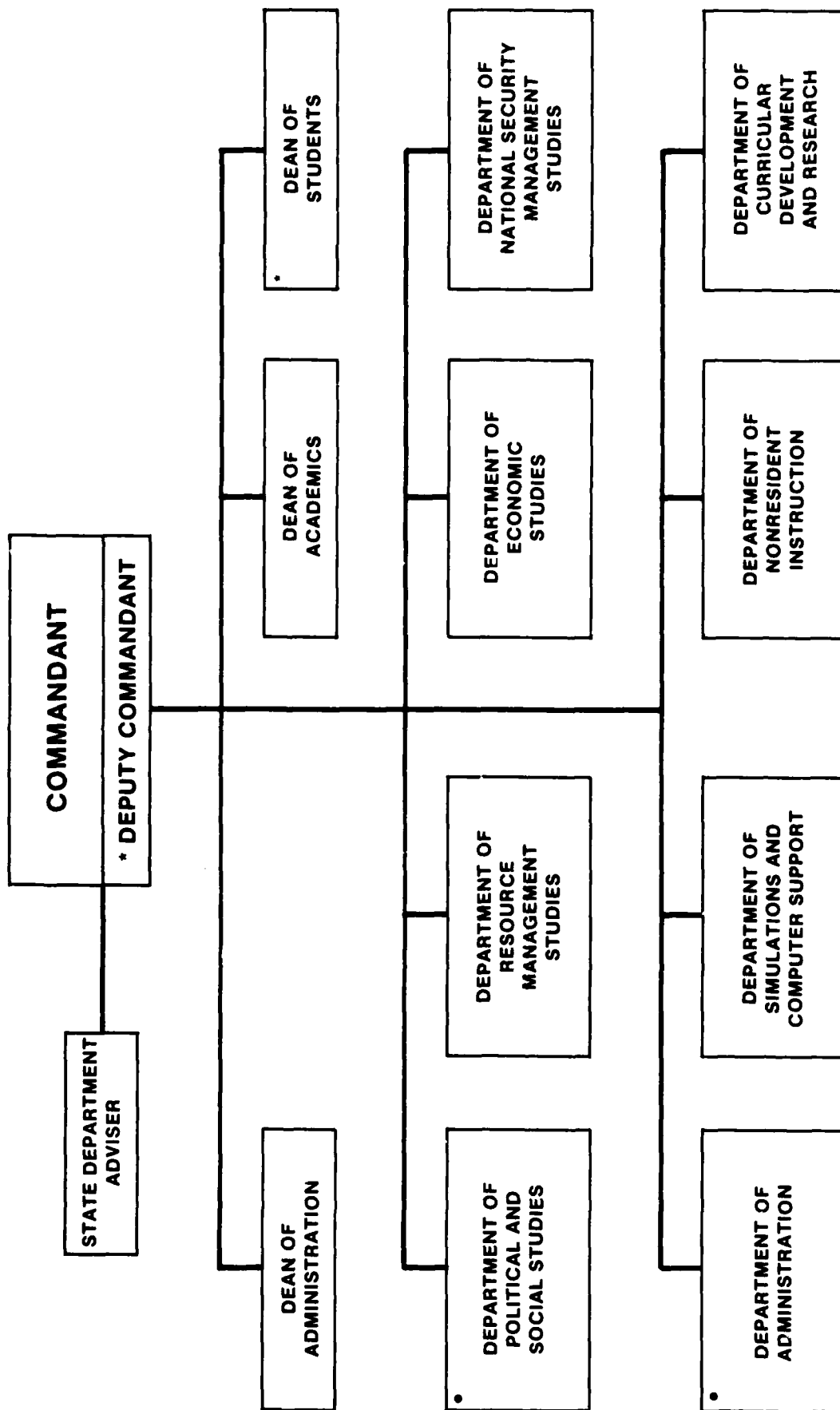
APPROVED:

*George W. Mundy*

GEORGE W. MUNDY  
LIEUTENANT GENERAL, USAF  
COMMANDANT 20 MAY 1959

# INDUSTRIAL COLLEGE OF THE ARMED FORCES FY 1968





**DUAL RESPONSIBILITIES:**

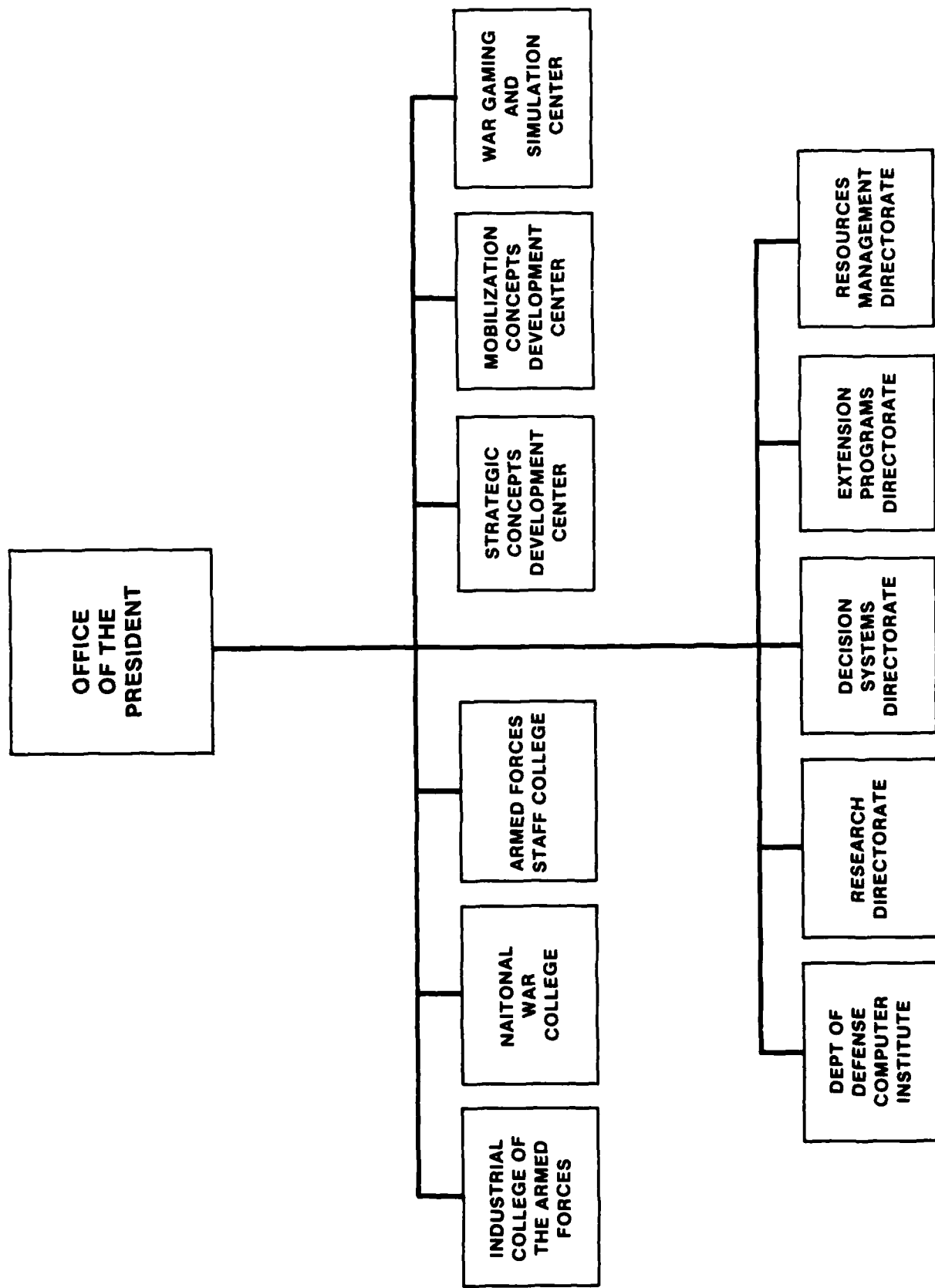
\* DEPUTY COMMANDANT/DEAN OF STUDENTS

• DEAN OF ADMINISTRATION/HEAD, DEPARTMENT OF ADMINISTRATION

1 JULY 1974

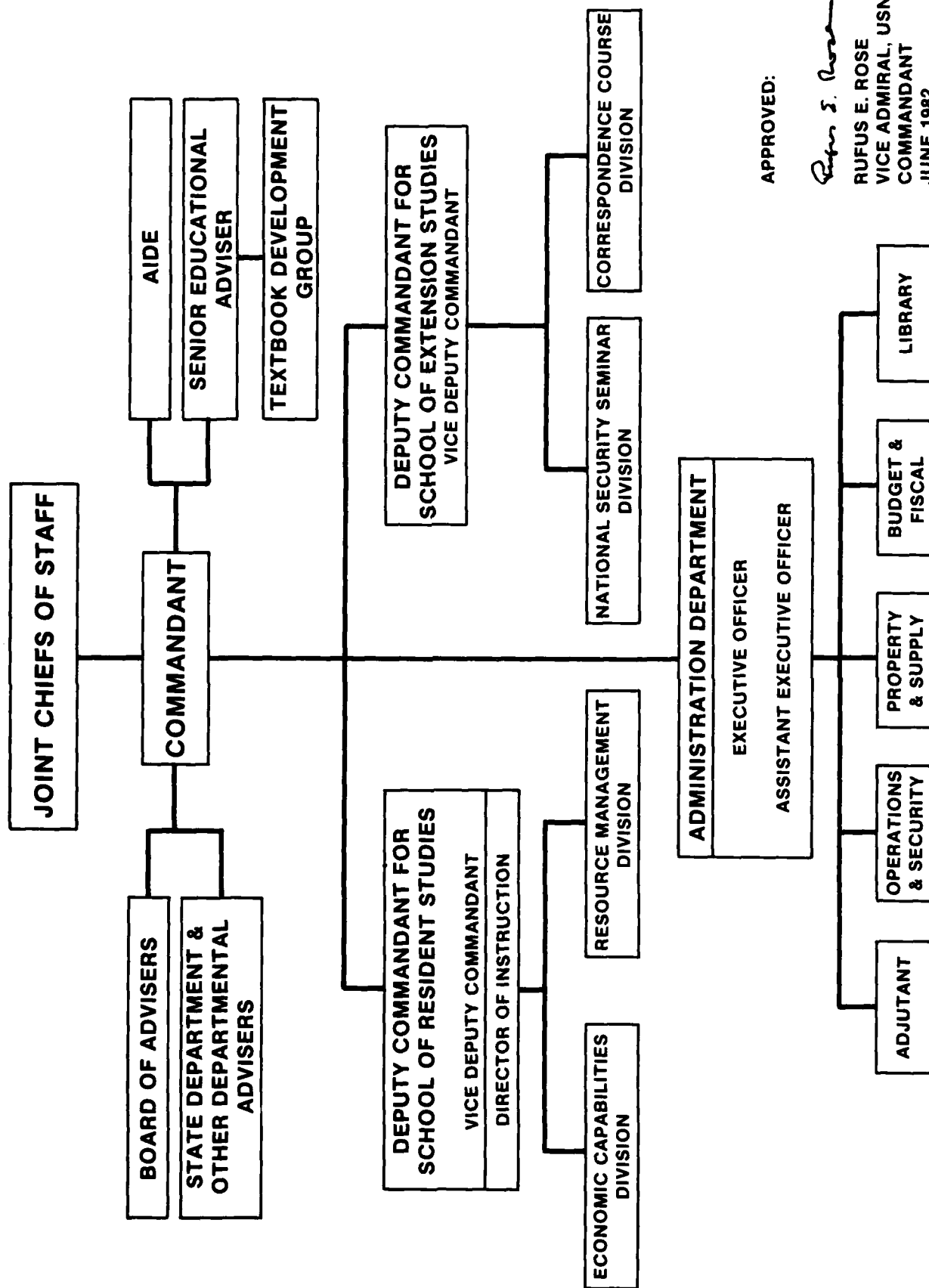


# NATIONAL DEFENSE UNIVERSITY (NDU) 1982



# INDUSTRIAL COLLEGE OF THE ARMED FORCES

WASHINGTON, 25, D.C.

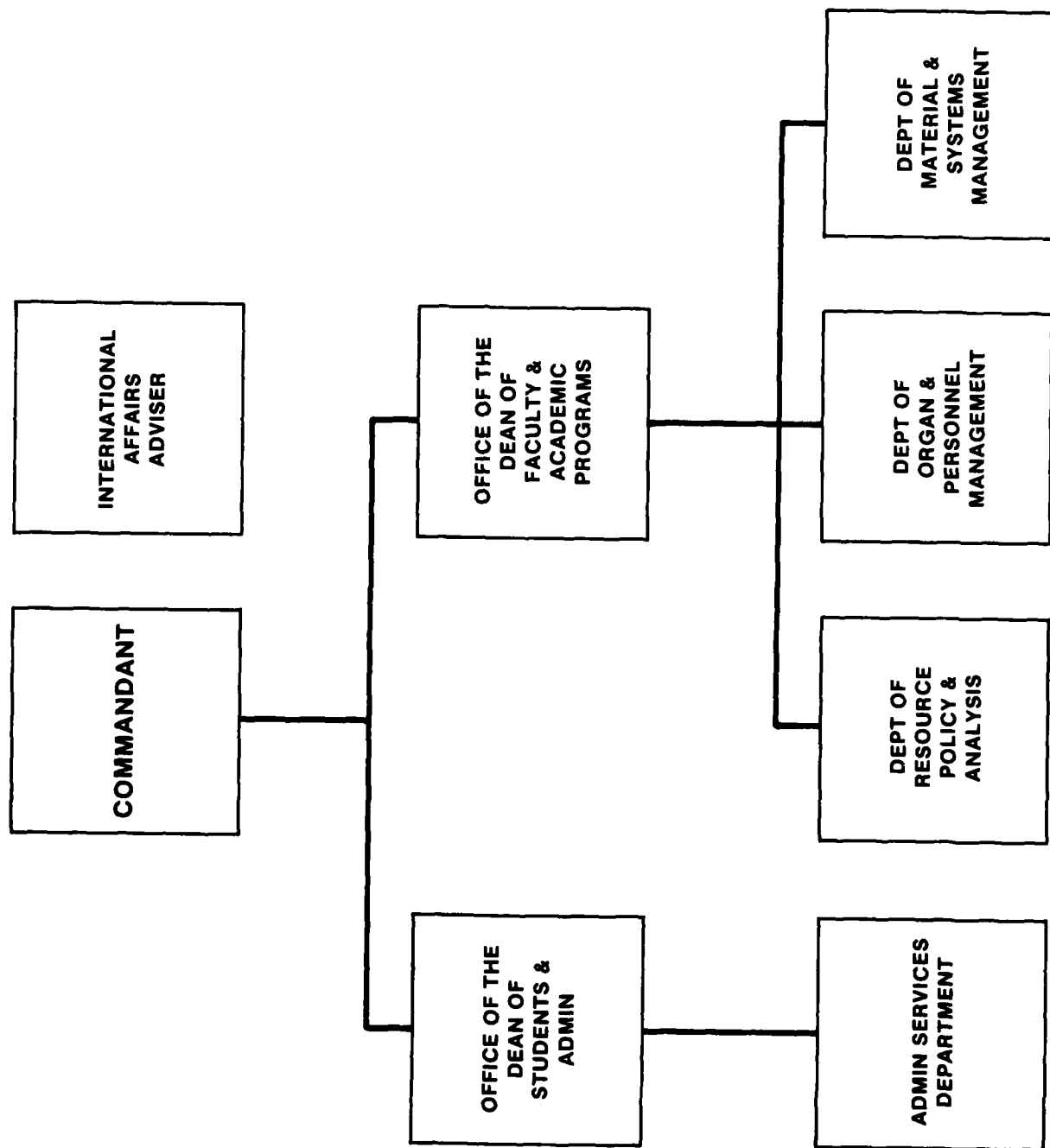


APPROVED:

*Rufus S. Rose*

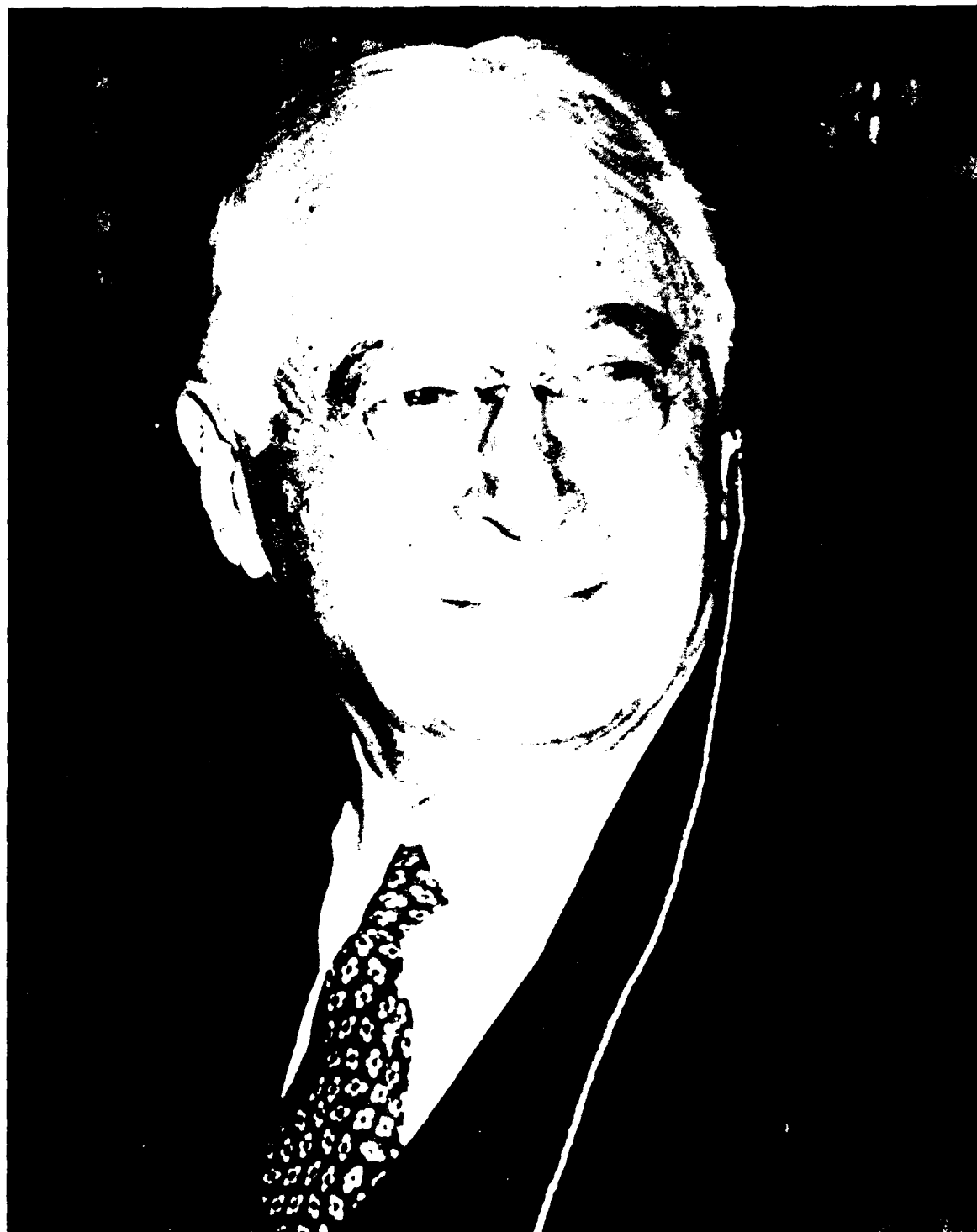
RUFUS E. ROSE  
VICE ADMIRAL, USN  
COMMANDANT  
JUNE 1982

# INDUSTRIAL COLLEGE OF THE ARMED FORCES (ICAF) 1982



**History of the Industrial College of the Armed Forces**

**APPENDIX C**



Following World War I, as Chairman of the War Industries Board, Mr. Bernard M. Baruch was a leading advocate of training and planning in peacetime for industrial preparedness. He played an important role in the establishment and growth of the Army Industrial College and in the reconstituting of this institution as the Industrial College of the Armed Forces.



Mr. Dwight F. Davis, as assistant Secretary of War, was directly responsible for the planning and actions which led to the establishment of the Army Industrial College.



Colonel Harley B. Ferguson, CE, first Director, Army Industrial College.

First Class to Graduate from the Army Industrial College  
(1924)



Front Row: Major John K. Clement, Ordnance; Lieutenant Colonel Arthur J. Lynch, Quartermaster Corps; Lieutenant Colonel Ira F. Fravel, Army Air Service; Major Sanford W. French, Medical Corps; Major William A. McCain, Quartermaster Corps (later served as Commandant of the College, 1930-1934).  
Second Row: Major Lawrence Watts, Signal Corps; Lieutenant Harry O. Tunis, Corps of Engineers; Lieutenant Harry R. Leblicher, Chemical Warfare Service; Major Richard H. Somers, Ordnance.





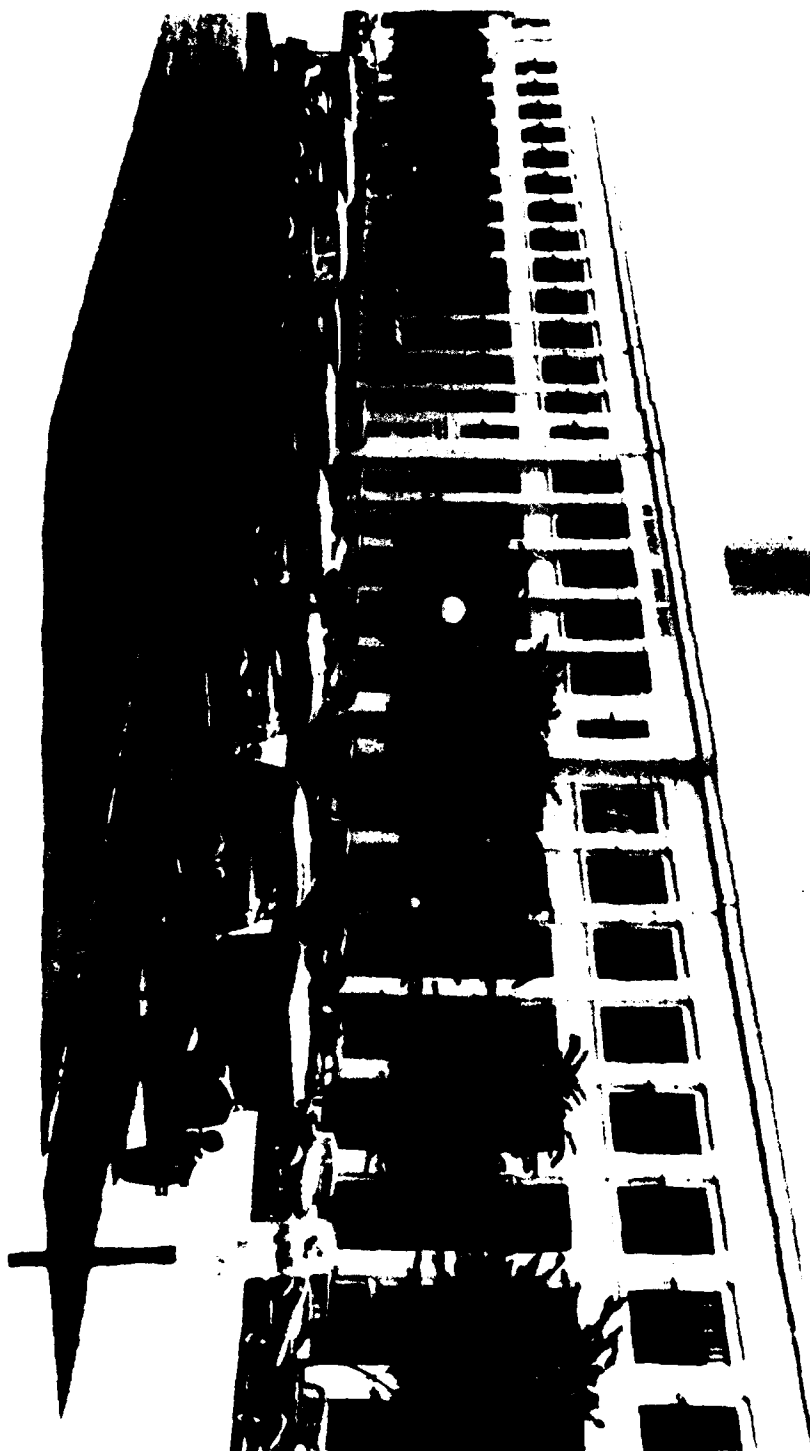
General Henry H. Arnold, Class of 1925



As a Major, United States Army, Dwight D. Eisenhower graduated from the Army Industrial College in 1933. He also served on the faculty and frequently appeared as a guest lecturer. In 1960, as President of the United States, he was the principal speaker at the dedication ceremonies for the new ICAF building.



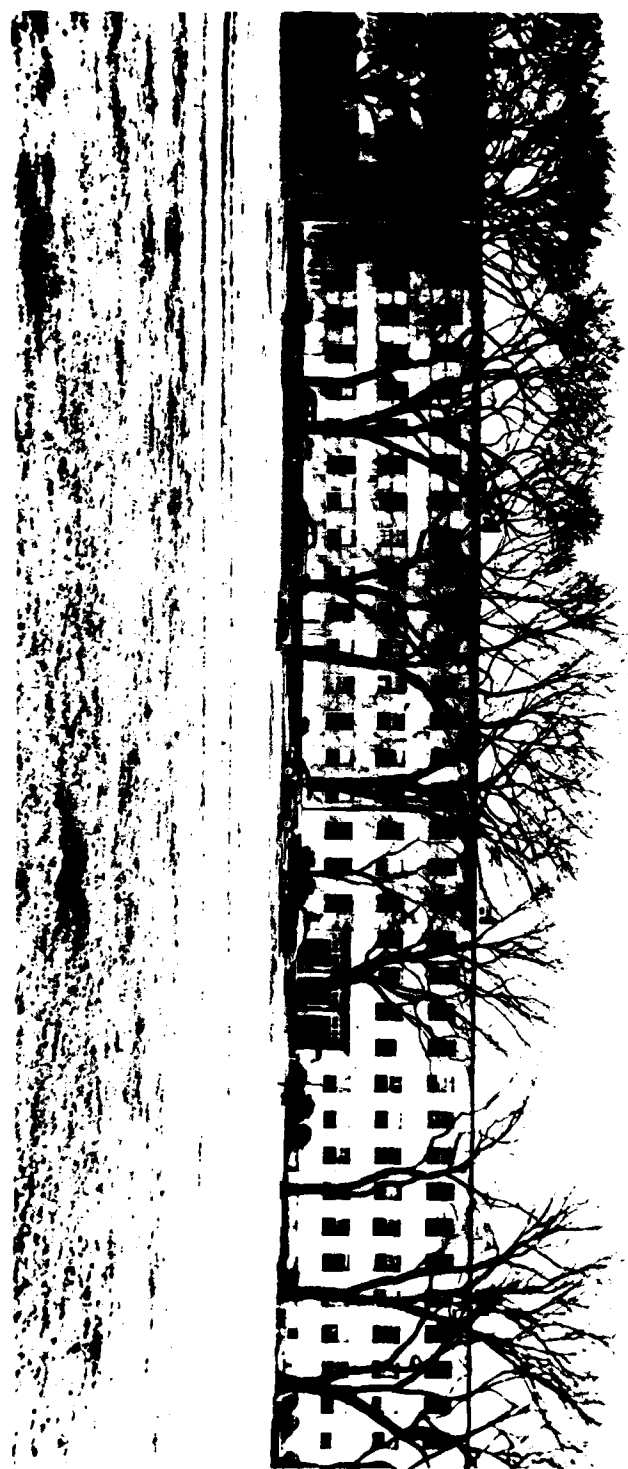
Mr. J. Carlton Ward has been closely associated with the development of the Industrial College since about 1935. A frequent lecturer at the College, he also served as the Chairman of the Board of Advisors. He has always been a close friend and staunch supporter of the Industrial College.



Munitions Building, 19th and Constitution Avenues, NW - the home of the Army Industrial College from its establishment in 1924 to World War II. The College was then moved to The Pentagon.



After World War II, the Industrial College of the Armed Forces (as it was now called) moved to quarters of its own adjacent to The National War College at Fort Lesley J. McNair. These "temporary" quarters provided better physical facilities for the College, making it possible to expand the conference and student committee portions of the resident course.



Tempo 5, Fort McNair, home of the Industrial College of the Armed Forces from 1946 to 1960.



DWIGHT D. EISENHOWER  
*President of the United States*

In this age in which physical sciences are revolutionizing the military art, few factors mean as much to our national security as the ability of our military leaders to keep pace with this revolution. To assure them of such knowledge is the special and exacting task of the Industrial College of the Armed Forces.

I am happy to take this occasion to state my confidence that the faculty of the Industrial College is performing this task with remarkable and commendable success. So doing, it is rendering vital service to the very safety of our Nation.

*Dwight D. Eisenhower*

*July 6, 1953*

## History of the Industrial College of the Armed Forces.

### SUGGESTIONS FOR FURTHER READING

American Ordnance Association.

The Industrial College of the Armed Forces: Thirty-Fifth Anniversary, 1955. Washington: The American Ordnance Association, 1955.

Black, Colonel James G., USA.

Review of Charter and Curriculum, School of Resident Studies. Industrial College of the Armed Forces. Washington: Industrial College of the Armed Forces, December 1962.

Chairman, Joint Chiefs of Staff (General George S. Brown, USAF).

Memorandum for the President, National Defense University, 25 February 1976, sub: Committee on Excellence in Education Action on Senior Service Colleges: Conclusions and Initiatives.

Commandant, The Army Industrial College (General Armstrong).  
To the Secretary of War, April 12, 1945. sub: Precept for Board on Postwar Army-Navy Training in Industrial Mobilization (Hancock Board).

Conference of the Board on Postwar Army-Navy Training in Industrial Mobilization (Hancock Board). Proceedings, June 15, 1945. Washington, The Army Industrial College.

Second Conference. Proceedings. July 26, 1945.

Falk, Dr. Stanley L.

The Industrial College in Transition, 1964-1965. Washington: Industrial College of the Armed Forces, March 1967.

The "New" Industrial College, 1965-1967. Washington: Industrial College of the Armed Forces, August, 1968.

"Implementation of the Plan for the Establishment of the National Defense University." Washington: National Defense University. January, 1976.

Industrial College of the Armed Forces

Report to the Joint Chiefs of Staff on Operations During FY 1954. (A consolidated report that includes 1953 activities. The ICAF report on operations was submitted to the Joint Chiefs of Staff annually through FY 1975. It was then replaced by the ICAF section in The National Defense University Report submitted annually to the Joint Chiefs of Staff.)



## History of the Industrial College of the Armed Forces.

### SUGGESTIONS FOR FURTHER READING

Catalog. 1968-1969.

(Annual editions appeared through 1973-1974)

"Commemorating Our Anniversary, February Twenty-Fifth, 1924-1969", Perspectives in Defense Management, February, 1969.

Industrial College of the Armed Forces Education Division Annual Reports, 1950-1956. Washington: Industrial College of the Armed Forces, 1956.

Office of the Commandant. "Review of Charter and Curriculum, School of Resident Studies, Industrial College of the Armed Forces." 15 December 1962.

Prospectus, Economic Mobilization Course for Reserve Officers, 10 July 1948.

The Industrial College of the Armed Forces, 1924-1929, Twenty-Fifth Anniversary, 25 February, 1949. Washington: Industrial College of the Armed Forces, 1949.

"Industrial College Shoots for Middle Managers." Armed Forces Management, March 1967, pp. 83-88.

Mundy, Lieutenant General George W., USAF

"Leadership for National Security," Army Information Digest, April 1961, pp. 32-36.

The National War College and The Industrial College of The Armed Forces Survey Board (The Baxter Board). Report to the Joint Chiefs of Staff, 20 January, 1955.

The National War College and The Industrial College of The Armed Forces. Plan for the Establishment of the National Defense University. November 1975.

Report of the Joint Meeting of The Board of Consultants of the National War College and the Board of Advisers of the Industrial College of the Armed Forces. 15-16 September, 1976.

Research Review Panel. "Summary Report of the Research Review Panel Convened at the Industrial College of the Armed Forces. 12-23 January 1959." Washington: Industrial College of the Armed Forces, 6 February 1959.

## History of the Industrial College of the Armed Forces.

### SUGGESTIONS FOR FURTHER READING

- Scammeld, Major J. M. CMP, USA  
History of the Industrial College of the Armed Forces.  
Washington: Industrial College of the Armed Forces,  
1946.
- Schomburg, Lt. Gen. August, USA  
"Defense Management Education." The Military Engineer, March-April 1966, pp. 92-94.
- Steele, Major General William S., USAF(ret).  
"Expanding Horizons Through By-Mail Instruction: The New Look of our Correspondence School." Defense Industry Bulletin, August 1966, pp 1-3, 21,22.
- Under Secretary of War (Rutherford).  
Memorandum to the Commandant, Army Industrial College,  
15 Dec 1941. sub: Closing of the Army Industrial College During the Present Emergency.
- U.S. Army War College.  
Descriptive Data, Senior Service Colleges, Academic Year 1974. U.S. Army War College, Carlisle Barracks, Pa., March 1974.
- U.S. Army Department of Defense, Assistant Secretary of Defense (Manpower and Reserve Affairs) (Major Henderson, USA). Memorandum for the Record, 8 January 1976, sub: Senior Service College Commandants Briefing of DOD Committee on Excellence in Education, 25 November 1975 (Includes Tab A Proposed Core Curriculum for Academic Year 1976-1977).
- U.S. Deputy Secretary of Defense (W. P. Clements, Jr).  
Memorandum for Secretaries of the Army, the Navy, the Air Force, and Chairman of the JCS, 16 January 1976, sub: Committee on Excellence in Education Action on the Senior Service Colleges.
- Memorandum for the Commandant, Industrial College of the Armed Forces, SM-10831, 3 September, 1948, sub: Reconstitution of the Industrial College of the Armed Forces.
- U.S. Joint Chiefs of Staff.  
Report by the J-1 to the Joint Chiefs of Staff on Consolidation of Senior Joint Colleges, JCS 2484/85. 27 August, 1974, and 17 December, 1974.
- U.S. Secretary of Defense.  
Memorandum to the Joint Chiefs of Staff, 31 August 1948, sub: Reconstitution of the Industrial College of the Armed Forces.

## **History of the Industrial College of the Armed Forces.**

### **SUGGESTIONS FOR FURTHER READING**

- U.S. War Department, Adjutant General.  
Memorandum to Major General Oliver P. Echols, USA, 27  
November 1943, sub: Board of Officers.
- Circular No. 337, Section III. December 28, 1943.
- Circular No. 130, 3 May 1946.  
(Redesignation of the Army Industrial College as the  
Industrial College of the Armed Forces).
- U.S. War Department, Service of Supply.  
Memorandum for the Adjutant General, 27 November 1943,  
sub: Proceedings of a Board of Officers, Reopening of  
Army Industrial College (The Echols Board).
- U.S. War Department, Under Secretary of War.  
Memorandum for the Commandant, Army Industrial College,  
15 December 1941, sub: Closing of the Industrial  
College During the Present Emergency.

END

FILMED

10-83

DTIC